PROJECT APPRAISAL DOCUMENT
ON A
PROPOSED CREDIT
IN THE AMOUNT OF SDR59 MILLION
(US$86 MILLION EQUIVALENT)
TO THE
SOCIALIST REPUBLIC OF VIETNAM
FOR A
NATURAL DISASTER RISK MANAGEMENT PROJECT
IN SUPPORT OF THE FIRST PHASE OF THE
NATURAL DISASTER RISK MANAGEMENT PROGRAM

August 16, 2005
CURRENCY EQUIVALENTS
(Exchange Rate Effective August 12, 2005)

Currency Unit = Dong (VND)
VND 15,856 = US$ 1
US$ 1.46323 = SDR 1

FISCAL YEAR
January 1 — December 31

ABBREVIATIONS AND ACRONYMS

APL  Adaptable Program Loan
AusAID  Australian Agency for International Development
CAS  Country Assistance Strategy
CBDRM  Community-based Disaster Risk Management
CCCC  Commune CBDRM Coordination Committee
CCFSC  Central Committee for Flood and Storm Control
CFSC  Committee for Flood and Storm Control (at Province, District and Commune levels)
CEMMA  Committee for Ethnic Minorities and Mountainous Areas
CFAA  Country Financial Accountability Assessment
CG  Consultative Group
CPMO  Central Project Management Office
CPO  Central Projects Office (of MARD)
CPRGS  Comprehensive Poverty Reduction and Growth Strategy
DARD  Provincial Department of Agriculture and Rural Development (of MARD)
DDO  Deferred Drawdown Option
DEM  Digital Elevation Model
DMC  Disaster Management Center
DMSFCD  Dyke Management and Storm and Flood Control Department
DMU  Disaster Management Unit
DONRE  Department of Natural Resources and Environment
DPI  Department of Planning and Investment
DPL  Development Policy Loan
DSU  Dam Safety Unit
EA  Environmental Assessment
EMC  Emergency Management Center
EMDP  Ethnic Minority Development Plan
EMP  Environmental Management Plan
EMPF  Ethnic Minority Policy Framework
ERL  Emergency Recovery Loan
FS  Feasibility Study
FMR  Financial Monitoring Report
GDHMS  General Department of Hydro-Meteorological Services
GIS  Geographic Information System
GOV  Government of Vietnam
GDP  Gross Domestic Product
IRR  Internal Rate of Return
JSDF  Japan Social Development Fund
LIDAR  Light Detection and Ranging
MARD  Ministry of Agriculture and Rural Development
MOCI  Ministry of Culture and Information
MOD  Ministry of Defense
MOET  Ministry of Education and Training
MOF    Ministry of Finance
MOFA   Ministry of Foreign Affairs
MOFI   Ministry of Fisheries
MOH    Ministry of Health
MOLISA Ministry of Labor, Invalids and Social Affairs
MONRE  Ministry of Natural Resources and Environment
MOT    Ministry of Transport
MPI    Ministry of Planning and Investment
NCSR   National Committee for Search and Rescue
NDMP   Natural Disaster Mitigation Partnership
NDRMP  Natural Disaster Risk Management Project
OM     Operations Manual
OOG    Office of Government
PCFSC  Provincial Committee for Flood and Storm Control
PER-IFA Public Expenditure Review and Integrated Fiduciary Assessment
PHRD   Policy Human Resource Development
PCU    Project Coordination Unit
PIM    Project Implementation Manual
PIP    Project Implementation Plan
PMR    Project Management Report
PMU    Project Management Unit
PPC    Provincial People’s Committee
PPMU   Provincial Project Management Unit
PFP    Project Preparation Report
PPU    Project Preparation Unit
PPSC   Provincial Project Steering Committee
PSC    Project Steering Committee
RAP    Resettlement Action Plan
RPF    Resettlement Policy Framework
RNE    Royal Netherlands Embassy
SA     Special Account
SBD    State Budget Department
SBV    State Bank of Vietnam
SCP    Safer Commune Plan
SIL    Specific Investment Loan
SIDA   Swedish International Development Agency
SIO    Sub-project Implementation Office
SNS    Second National Strategy
SOE    Statement of Expenditure
SRHMC  Southern Regional Hydro-Meteorological Center
STD    State Treasury Department
UNDP   United Nations Development Program
VWRAP  Vietnam Water Resources Assistance Project

Vice President: Jemal-ud-din Kassum, EAPVP
Country Manager/Director: Klaus Rohland, EACVF
Sector Director: Mark D. Wilson, EASRD
Task Team Leader: Laurent Msellati, EASRD

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Map
IBRD 33750
VIETNAM

NATURAL DISASTER RISK MANAGEMENT PROJECT

PROJECT APPRAISAL DOCUMENT
East Asia and Pacific Region
EASRD

Date: August 16, 2005
Country Director: Klaus Rohland
Sector Manager/Director: Mark D. Wilson
Project ID: P073361
Lending Instrument: Adaptable Program Loan

Team Leader: Laurent Msellati
Sectors: General water, sanitation and flood protection sector (100%)
Themes: Natural disaster management (P)

Environmental screening category: A
Safeguard screening category: S2

Program Financing Data

<table>
<thead>
<tr>
<th>APL</th>
<th>Indicative financing Plan</th>
<th>Estimated Implementation Period</th>
<th>Borrower</th>
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<td>IBRD US$m</td>
<td>Others US$m</td>
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<td>21.50</td>
<td>107.50</td>
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<td>APL 2 Credit</td>
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<tr>
<td>Total</td>
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Project Financing Data for Phase 1

[ ] Loan [X] Credit [ ] Grant [ ] Guarantee [ ] Other:

For Loans/Credits/Others:
Total Bank financing (US$m.): 86.00
Proposed terms: Standard, with 40-year maturity and 10 years grace period

Financing Plan (US$m) for Phase 1

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<tr>
<th>Source</th>
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<th>Foreign</th>
<th>Total</th>
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<td>BORROWER/RECIPIENT</td>
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<td>1.40</td>
<td>12.00</td>
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<td>INTERNATIONAL DEVELOPMENT ASSOCIATION</td>
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<td>GOVERNMENT OF JAPAN (PHRD Grant)</td>
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<td>FINANCING GAP (Possible funding from the Netherlands)</td>
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<td>Total</td>
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<td>107.50</td>
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Borrower: Socialist Republic of Vietnam

Responsible Agency: Ministry of Agriculture and Rural Development – Central Projects Office (MARD-CPO)
23 Hang Tre Street
Hanoi, Vietnam
Tel: 844- 8253921 Fax: 844 - 8242372
Email: cpo@mard.gov.vn
### Project Implementation Period

**5 years**

**Expected Effectiveness Date:** October 31, 2005  
**Expected Closing Date:** June 30, 2010

### Estimated Disbursements (Bank FY/US$m) for Phase 1

<table>
<thead>
<tr>
<th>FY</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
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<tr>
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<td>38.0</td>
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<td>81.0</td>
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### Project Development Objective

**Ref. PAD B.2, Annex 3**

The project development objective is the establishment and implementation of a comprehensive natural disaster risk management framework for natural disaster prevention, preparedness, mitigation and recovery. This objective would be achieved by:

(a) reducing vulnerability to flood and storm hazards in project areas;
(b) increasing the efficiency of post-disaster recovery and reconstruction efforts; and
(c) strengthening the capacity of national and local disaster risk management institutions.

### Project Description

**Ref. PAD B.3.a, Annex 4**

The Project will have four proposed components:

- Component 1: Prevention and Mitigation Investment
- Component 2: Community-based Disaster Risk Management
- Component 3: Post-Disaster Reconstruction Support
- Component 4: Project Management and Institutional Strengthening

In addition, a pilot program to test innovative approaches to community-based disaster risk management would complement the Project.

### Which Safeguard Policies are Triggered, if any?

**Ref. PAD D.6, Annex 10**

- Environmental Assessment (OP/BP/GP 4.01)
- Natural Habitats (OP/BP 4.04)
- Involuntary Resettlement (OP/BP 4.12)
- Indigenous Peoples (OD 4.20, being revised as OP 4.10)
- Safety of Dams (OP/BP 4.37)

### Significant, non-standard conditions, if any, for:

**Ref. PAD C.7**

- Board presentation: None

- Loan/credit effectiveness: Besides the standard requirements the following conditions have been set for credit effectiveness: (a) the Project Steering Committee has been established; (b) the Project Implementation Manual has been formally approved; (c) the Central Project Management Office has been established and staffed to the satisfaction of the Association; (d) a Project Management Unit has been established for each of the Year-1 sub-projects and staffed to the satisfaction of the Association; and (e) the procurement and financial management staff have completed training in a manner satisfactory to the Association.

### Covenants applicable to project implementation:

No significant or non-standard conditions.
A. STRATEGIC CONTEXT AND RATIONALE

1. Country and sector issues

**Development Context.** Vietnam is one of the most natural disaster-prone countries in the world. Because of its geographic position and topography, Vietnam suffers from typhoons, tropical storms, floods, drought, seawater intrusions, landslides, forest fires and occasionally earthquakes. Disasters triggered by typhoons and floods are by far the most frequent and severe. With around 70 percent of the population living in lowland areas in the Red River and Mekong deltas and along the 3,200 km coastline, these disasters result in human casualties, important economic losses and environmental damage.

Natural disasters are becoming more damaging and more complex to handle, and apparently increasing in frequency over the long term. In the period 1995-2004, natural disasters claimed almost 6,000 lives in Vietnam, completely destroyed over 320,000 houses and almost 9,000 boats and resulted in direct material losses to the capital stock of over US$2.5 billion, equivalent to an average of five percent of gross annual capital formation. Actual economic losses could be up to double this amount (see Annex 9). Although Vietnam has experienced relatively fewer losses in the last five years (see Annex 1), longer-term patterns suggest that periods of extreme climatic events and severe hazards are likely to be repeated.

**Government Strategy and Institutional Framework for Disaster Management.** Strengthening disaster management remains a priority of the Government’s development agenda. In the past, Vietnam has given priority to laws and policies relating to the complex tasks of disaster mitigation and management and has instituted a structure for water-related disaster management: the Central Committee for Flood and Storm Control (CCFSC) and its subordinate provincial and local committees (see Figure 4, Annex 6). The CCFSC is a cross-ministerial agency established in 1990 to strengthen institutional coordination especially in the area of emergency response and long-term reconstruction and recovery.

The Ministry of Agriculture and Rural Development (MARD) has drafted the Second National Strategy (SNS) for disaster management in Vietnam, which will be submitted to the Government for approval prior to Phase II of the project. The revised strategy puts disaster preparedness and forecasting as its foremost objectives, shifting the focus from disaster response and relief. The strategy recognizes the need for a more integrated, holistic approach to disaster risk management, linking into broader development and policy planning at national, regional, provincial and local levels. In particular, the strategy emphasizes disaster risk analysis and evaluation and the promotion of information sharing between all levels of Government.

**Government Capacity for Disaster Risk Management.** Up to now, CCFSC’s actions have been largely focused on disaster response; however, the institutional capacity and resources to carry out its current mandate are limited. It is likely that the SNS, when it becomes effective, would place additional demands on the CCFSC, its subordinates and partner agencies. For

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1 Second National Strategy and Action Plan for Disaster Mitigation and Management in Vietnam, 2001-2010; MARD, Central Committee for Flood and Storm Control
example, the planning, construction and rehabilitation of critical infrastructure for flood and
storm control (such as river and sea dyke systems and weirs) have been limited by shortfalls in
the availability of public funds. Post-disaster reconstruction of infrastructure is similarly delayed
and under-resourced due to a significant financial gap in government contingency budgets.
Studies carried out during project preparation indicate that the overall annual funding gaps for all
disaster relief and reconstruction expenditure requirements over the period 2000-2003 ranged
between US$46 million and US$130 million. Priority in the allocation of available resources is
given to humanitarian relief, related social welfare support and temporary repairs, and because of
funding shortfalls reconstruction activities can take up to four or five years to complete.

However, it is not only for structural investments that Government requires additional resources
and the evolving strategy for disaster risk management recognizes that while the continued focus
on infrastructure work is important it is not sufficient to meet all goals. Non-structural
investments to establish a system for risk management are also essential, including improving the
capacity for flood and storm modeling and forecasting, early warning and response systems. The
institutional framework for implementing this new comprehensive approach to disaster
management needs to be further developed and expanded to actively involve key agencies and
stakeholders. This includes building capability for preparedness, increasing the participation of
communities in planning and implementation, and establishing inter-sectoral approaches that
involve both central and provincial authorities.

**Natural Disaster Mitigation Partnership (NDMP).** In response to Government needs and in
the aftermath of particularly intense natural disasters which affected Central Vietnam in 1999,
the NDMP was established in 2002 with the support of the United Nations Development
Program (UNDP) and the Royal Netherlands Embassy (RNE), and has since gathered wider
endorsement for an integrated approach to natural disaster risk management. The donor
community, and the Bank in particular as its co-chair, has remained engaged through the NDMP
and is mobilizing support for the Government’s shift to promote non-structural investments and
community involvement that will continue to foster a broader approach to disaster risk
management. After a preparatory phase, the NDMP is now entering a second phase with funding
until end-2007 provided by UNDP, the RNE, the Embassy of Luxembourg and the Australian
Agency for International Development (AusAID).

2. **Rationale for Bank involvement**

The Bank has accumulated a broad knowledge and growing operational experience in disaster
risk management and response in more than 30 countries over the past two decades (see Annex
2). Its integral involvement in the development process of these countries, in conjunction with
its more recent emphasis on supporting poverty reduction strategies, has provided the Bank with
a special perspective to observe the close link between natural disasters and poverty.

The proposed Program adopts an innovative approach; it provides support primarily for disaster
prevention and mitigation measures, including at the community level where vulnerability is
often greatest, to reduce the impact of natural hazards on Vietnam’s development process. It will
build on the Bank’s recent experiences in disaster prevention and vulnerability reduction.
The Bank’s role in the Government-Donor Consultative Group (CG) Framework also provides it with a special opportunity to mobilize not only additional resources but also international expertise in support of the Government’s long-term disaster management strategy. Specifically, Bank support has enabled NGO involvement during the preparation process in the selection of vulnerable communities with leadership capacity and the mobilization of international knowledge for the design of the contingency funding mechanism for the reconstruction of essential public infrastructure in the aftermath of a natural disaster.

3. Higher level objectives to which the project contributes

The project will directly support sustainable development which is a key theme of the FY03-06 Country Assistance Strategy (CAS) for Vietnam discussed by the Board in September 2002 and updated in January 2004\(^2\). The Vietnam Development Report 2004 and the Joint Staff Assessment of the Comprehensive Poverty Reduction and Growth Strategy (CPRGS)\(^3\) confirm that close to five percent of households are still vulnerable to falling into poverty if confronted with an adverse shock caused by a natural disaster. Reducing this vulnerability of households to natural disasters is a specific development goal\(^4\).

The relationship between vulnerability and poverty is important. Poverty is the single most important factor determining vulnerability to natural disasters, in part reflecting the location of housing (e.g., on floodplains, riverbanks, steep slopes); the poor construction quality of houses, which are easily damaged; the dependence on livestock and crops that are highly susceptible to losses from disasters; and limited access to financial and other resources to support the resumption of livelihood activities and repair of homes. Mitigating the impact of natural hazards continues to be an important part of the Bank’s assistance program and is being addressed in its new rural development strategy.

B. PROJECT DESCRIPTION

1. Lending instrument

The project would be financed by an Adaptable Program Loan (APL) in the amount of US$86 million equivalent. The project would be the first phase of a two-phase Natural Disaster Risk Management Program. The total estimated financing required for the Program is US$191.5 million, of which IDA would finance US$86 million equivalent in Phase I and US$64 million equivalent in Phase II. Phase I is scheduled for four years (2006-2010) and Phase II for three years (2009-2012). There will be a brief overlap between the two phases to ensure uninterrupted support.

The use of an APL is appropriate to support sustained changes in the approach to disaster management, including the development of the necessary institutional framework. Phasing of the

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\(^4\) *Vietnam’s Development Goal Number 8*
Program would enable the gradual increase in the scale and complexity of activities, with Phase I focusing on relatively simple and achievable objectives involving a limited number of provinces and ministries and putting into place the institutional framework and capacity to implement more complex activities in Phase II.

2. Program Objective and Phases

The overriding goal of the Program is to reduce human, economic and financial losses from natural disasters and ensure rapid post-disaster recovery of poor communities living in hazard-prone areas. This will ultimately require substantial institutional reform and development as Vietnam moves to a comprehensive and integrated approach to disaster risk management encompassing development planning, disaster preparedness, forecasting, prevention, mitigation, recovery and reconstruction.

**Phase I (2006-2010).** The focus of Phase I would be to implement critical disaster prevention and mitigation investments, to finalize the national strategy for disaster risk management, and to develop and strengthen the institutional framework for implementing the strategy. Specifically, Phase I would be implemented in about 12 provinces and would include: (a) the implementation of high-priority investment sub-projects and the preparation of feasibility studies for Phase II sub-projects; (b) the implementation of a Community-based Disaster Risk Management (CBDRM) approach in 10 pilot communes under a stand-alone pilot program and the scaling-up of this approach in selected communes; (c) full mobilization of contingency resources for post-disaster reconstruction; and (d) critical institutional strengthening and capacity-building activities. The estimated total cost of Phase I is US$107.5 million, of which the IDA Credit would finance US$86 million and co-financing would provide US$9.5 million of grants. In addition, complementary financing would be provided under a Japanese Social Development Fund (JSDF) grant of US$1.5 million to finance the complementary, stand-alone Pilot CBDRM Program.

**Phase II (2009-2012).** Phase II would implement more complex investments involving more provinces and requiring greater institutional integration. Specifically, it is proposed that five provinces would be added in Phase II, bringing the total to 17 provinces. Activities would include: more complex structural and non-structural sub-projects; the implementation of Safer Commune Plans (SCPs) in additional selected communes; and the enhancement of natural disaster risk management capability. In addition, if requested by the Government, additional funds could be provided by IDA for post-disaster reconstruction under Phase II. Future disbursement could follow the country’s disbursement mechanism of the State Contingency Budget. The estimated total cost of Phase II is US$84 million, to be financed by an IDA Credit of US$64 million and co-financing grants in an amount to be determined.

**Triggers to move from Phase I to Phase II.** The proposed triggers are designed to provide strategic goals to assist the decision on whether or not to proceed to Phase II of the Program. Achieving the triggers will also help shape Phase II and determine its areas of emphasis. The

---

5 A PHRD Co-financing Grant (US$4.5 million) has been approved by the Government of Japan. The Government of the Netherlands has also committed to co-finance the project for an estimated amount of US$5 million. These grants would be provided to the Government of Vietnam and are non-reimbursable.
proposed triggers, which are presented in the Letter of Development Program of the Government attached in Annex 16, are as follows:

**Policy development triggers:**
(a) The Second National Strategy and Action Plan for Disaster Mitigation and Management (2001-2010) would have been approved by the Government;
(b) The Circular from the General Statistics Office guiding disaster damage statistics and assessment would have been amended; and
(c) At least 10 Provinces would have prepared Natural Disaster Mitigation Investment Plans, acceptable to the Association, in which structural investments under Component 1 have been selected based on detailed risk assessments and are complemented by both structural and non-structural investments under Component 2 (following the principles of integrated risk management / river-basin approaches).

**Capacity Building:**
(d) The Disaster Management Center as the standing office of the CCFSC would have been strengthened (staffed trained, and risk management tools in place); and
(e) Guidelines and criteria acceptable to the Association for prioritizing allocation of post-disaster assistance would have been established and be in use.

**Performance:**
(f) Phase I Credit would be at least 75 percent disbursed.

During negotiations, it was agreed that five of the six proposed triggers, including the three policy development triggers, would have to be met to move from Phase I to Phase II of the Program.

3. **Project development objective and key indicators**

The project development objective is the establishment and implementation of a comprehensive risk management framework for natural disaster prevention, preparedness, mitigation and recovery.

The project would assist the Government to achieve the following:

- **Reduce vulnerability to flood and storm hazards in project areas,** with two expected outcomes: (a) central Ministries and Provinces would implement structural and non-structural investments; and (b) Government would adapt its approach to disaster management to include CBDRM;
- **Increase the efficiency of post-disaster recovery and reconstruction efforts,** with two expected outcomes: (a) Government speed and efficiency in the allocation and disbursement of post-disaster resources would be increased; and (b) the State Contingency Budget would be used efficiently to support post-disaster reconstruction of public infrastructure; and
- **Strengthen the capacity of national and local disaster risk management institutions,** with two expected outcomes: (a) Government would develop the capacity to strategically plan structural investments for disaster mitigation based on full technical, social,
environmental and economic analyses; and (b) relevant provincial and central Government agencies would have the institutional and technical capacity for collection, analysis and dissemination of information for risk management.

Key indicators for achievement of the development objective would be monitored during project implementation, including:

- the number of provinces with completed Natural Disaster Mitigation Investment Plans;
- the number of feasibility studies completed for sub-projects;
- the number sub-projects completed; and
- the number of SCPs completed.

4. Project components

The proposed project would focus on the most severely affected provinces, mainly the frequently and deeply flooded areas of the Mekong Delta and the North Central Provinces. The project would have four components:

Component 1: Prevention and Mitigation Investments
Component 2: Community-based Disaster Risk Management
Component 3: Post-disaster Reconstruction Support
Component 4: Project Management and Institutional Strengthening

The project would assist the Government in responding to the more urgent pre-disaster (Components 1 and 2) and post-disaster (Component 3) needs of the country while strengthening institutional coordination across the central and local government institutions (Component 4). At the same time, it would help lay the basis for a sustainable disaster risk management strategy based on risk-management principles by financing strategic investment and related policy studies, including the investigation of possible risk-sharing schemes.

Component 1 – Prevention and Mitigation Investments (estimated cost US$73.7 million, of which IDA Credit US$63.5 million)

This component would support priority prevention and mitigation medium-scale investment sub-projects (around seven in total) to reduce disaster risks and strengthen prevention capabilities in areas most affected by floods and storms. Specifically the component would support:

(a) **Structural sub-projects.** Investments would focus on the construction and rehabilitation of flood and storm-control infrastructure. In Year 1, two structural sub-projects (with an estimated cost of US$21 million) have been included in the implementation program: (a) Vuc Mau reservoir rehabilitation in Nghe An Province (North Central Region); and (b) Ba Tri sea dyke construction in Ben Tre Province (Mekong Delta Region). In subsequent years, other sub-
projects would be selected and the project would support the screening and selection process, conduct full feasibility studies, and implement the selected sub-projects;

(b) **Non-structural sub-projects.** Investments would support the upgrading of flood and storm monitoring, modeling and prediction capabilities, and enhance early warning and response systems. In Year 1, the Mekong River Delta Flood Warning and Monitoring System (with an estimated cost of US$8.5 million) would be implemented. Other sub-projects would be selected, prepared and implemented in subsequent years; and

(c) **Improving the Selection Process for Investments.** The project would support the strengthening of the institutional process and capacity for selecting sub-project investments, with the aim of achieving an adequate balance between structural and non-structural investments. Specifically, the project would support: (a) strengthening the selection process based on detailed hazard criteria, risk assessments, probability-based cost-benefit analyses, and a demonstrated capability of selected sub-projects to reduce disaster risk in the wider context of integrated water resources management; 7 and (b) diversifying the list of sub-projects by including ministries and agencies that are members of the CCFSC, such as the Ministry of Natural Resources and Environment (MONRE) and the Ministry of Fisheries (MOFI) in Phase I. The Ministry of Transport (MOT) and the Ministry of Education and Training (MOET) would be supported in Phase II.

**Component 2 – Community-based Disaster Risk Management (estimated cost US$1 million, of which IDA Credit US$0)**

Under this component, entirely funded by grants, the CBDRM approach would be combined with other components to build the capacity of the most vulnerable populations to carry out risk reduction measures and reduce their vulnerability to disasters. The component would support the scaling-up of CBDRM innovative approaches in selected communes (approximately 30) by preparing and beginning implementation of SCPs. The component would build on the lessons learnt from a complementary, stand-alone Pilot CBDRM Program to be funded from a JSDF grant of US$1.5 million which would develop and test innovative approaches to CBDRM in Ben Tre, Thua Thien Hue and Ha Tinh.

Four types of activities would be financed under the Pilot CBDRM Program which could subsequently be scaled up under the component:

(a) **Capacity building.** Community and local government capacity building, including village and commune-level capacity building to support development of SCPs using participatory planning in about ten pilot communes;

(b) **Monitoring and Evaluation.** Strengthening the partnership between poor communities and local government to develop a monitoring and evaluation system, and to carry out monitoring and evaluation of CBDRM activities;

(c) **Community structural investment sub-projects.** Community-driven disaster risk reduction and mitigation, including the construction of safe water systems, multi-purpose evacuation

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7 Selection criteria for structural and non-structural sub-projects have been agreed with Government (Annex4)
centers, health posts, canals for drainage, protection dykes, and improved roads for evacuation and access to humanitarian relief; and

(d) Community non-structural investment sub-projects. Community-driven disaster risk preparedness, including non-structural CBDRM sub-projects to support safer commune planning for disaster preparedness and response, improved early warning and communications systems, evacuation plans and demonstration, food and water storage containers, first aid training and equipment.

Component 3 – Post-Disaster Reconstruction Support (estimated cost US$20.8 million, of which IDA Credit US$20 million)

This component would support post-disaster reconstruction of small-size public infrastructure, supporting fast recovery and reducing the diversion of limited public investment resources from new development investments into reconstruction. Specifically, under this component the project would finance:

(a) A rapid disbursement facility. This would provide funding for post-disaster reconstruction of eligible public infrastructure, helping to address a recurrent annual financing gap for this purpose. It will operate to the extent possible in accordance with existing government procedures for allocation and disbursement of its State Contingency Budget. The portion of the Credit allocated to this component would be expected to be fully disbursed over a three to four year period. Additional IDA funding could be channeled through the same institutional arrangements and procedures in the event of a major disaster, strengthening the speed and effectiveness of the Government’s response to major events; and

(b) Institutional strengthening. Financed under a PHRD co-financing grant, this would support the improvement of the damage assessment process and the efficiency and effectiveness of public resource utilization for post-disaster reconstruction.

Component 4 – Project Management and Institutional Strengthening (estimated cost US$12 million, of which IDA Credit US$2.5 million)

This component would support an efficient project management organization and strengthen government institutions to ensure better coordination and integration among the agencies and different levels responsible for prevention, response and recovery. Specifically, under this component the proposed project would support:

(a) Project management and technical assistance for implementing agencies (i.e., CPMO, PCUs and PPMUs). This would include: (i) incremental staff at central and provincial levels and related incremental operating costs; (ii) provision of equipment and vehicles; (iii) provision of technical assistance composed of national and international specialists for management support, including advisory and training support; and (iv) provision of technical assistance, equipment and training activities to support financial and environmental management, as well as monitoring and evaluation functions;

(b) Institutional strengthening, including support to: (i) an Institutional Strengthening Development Plan through the provision of technical assistance to mainstream natural disaster risk management into development planning and support the update and implementation of the
Second National Strategy and Action Plan for Disaster Mitigation and Management by funding strategic studies; and (ii) a Training Program to support the development of curricula and instructional material and the delivery of training. All the activities under this sub-component would be financed by a PHRD co-financing grant; and

(c) **Risk Management Capability Enhancement**, including the provision of technical assistance to strengthen: (i) risk identification in major centers, including the establishment of geodetic reference systems, acquisition of satellite imagery, aerial photography, and related training; (ii) risk analysis, including upgrading existing national facilities for Geographic Information Systems (GIS) and numerical modeling, and the development of risk mapping and risk loss models; (iii) risk assessment, including production of orthophoto maps and digital elevation models (DEMs) and technical assistance for modeling cyclonic winds, tidal surges, storm waves and surges, tsunamis, catchment and river floods, and coastal impacts; and (iv) risk treatment, including equipment upgrading and training for ocean search and rescue modeling capability, oil spill environmental modeling capability, and technical assistance to develop contingency planning for water supply and waste-water treatment. These activities are expected to be financed by grants from the Government of the Netherlands.

<table>
<thead>
<tr>
<th>Component</th>
<th>Indicative Cost (US$)</th>
<th>% of Total</th>
<th>IDA Financing (US$)</th>
<th>IDA Financing (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Prevention and mitigation investments</td>
<td>73.7</td>
<td>68.6</td>
<td>63.5</td>
<td>86.2</td>
</tr>
<tr>
<td>B. Community-based disaster risk management</td>
<td>1.0</td>
<td>0.9</td>
<td>-</td>
<td>0.0</td>
</tr>
<tr>
<td>C. Post-disaster reconstruction support</td>
<td>20.8</td>
<td>19.3</td>
<td>20.0</td>
<td>96.2</td>
</tr>
<tr>
<td>D. Project management and institutional strengthening</td>
<td>12.0</td>
<td>11.2</td>
<td>2.5</td>
<td>20.8</td>
</tr>
<tr>
<td><strong>Total Project Costs</strong></td>
<td><strong>107.5</strong></td>
<td><strong>100.0</strong></td>
<td><strong>86.0</strong></td>
<td><strong>80.0</strong></td>
</tr>
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</table>

5. **Lessons learned and reflected in the project design**

Lessons have been drawn from recent experience dealing with natural disasters in Vietnam and from Bank Group experience in a wide range of countries. Twenty-four projects related to disaster management were completed by the Bank between 1995 and 2002. Most addressed post-disaster reconstruction, although recently the Bank has been more systematically including mitigation and prevention measures where applicable (see Annex 2). Specific lessons that can be drawn from recent experience are:

- Assistance for emergency and restoration projects should include long-term planning for hazard mitigation and loss-reduction measures.
- A comprehensive disaster risk management program requires an efficient institutional structure. In many countries, disaster management is shared by several ministries coordinated by a central agency. This works best where: (a) the coordinating agency can provide national leadership, with emphasis on a “bottom-up” approach and participation of all stakeholders; and (b) there is an operational planning framework, which includes resource requirements and a clear delineation of responsibilities.
Reconstruction efforts must include mitigation measures based on accurate damage assessments to ensure that proper measures are implemented and that the key factors contributing to the disaster are addressed.

Specific target populations and project objectives must be clearly identified. Target groups must be established at the beginning of a project, not once project implementation has begun.

The involvement of local communities in disaster management activities, both in pre- and post-disaster efforts, is important to ensure long-term sustainability of programs and to empower local communities. Resilience in communities comes from reducing vulnerability to disasters and building capacity to deal with them. Local community efforts to manage risk should be a fundamental building block in disaster management activities, supported by a strategic framework and associated enabling legislation to undertake the necessary activities.

Proper financial mechanisms must be in place at the inception of a reconstruction project. The fiduciary and procurement frameworks should be flexible but stringent and management must avoid unnecessary complexity to reduce delays due to governance issues.

6. Alternatives considered and reasons for rejection

Financing instrument. The Government of Vietnam requested an APL, which was agreed to by IDA. A Specific Investment Loan (SIL) was considered but rejected as an APL would allow greater ability to phase-in progressive capacity building at the provincial and local levels and add more flexibility to adapt the Program design in the light of experience gained in implementing the first phase. Consideration was also given to using an Emergency Recovery Loan (ERL). This was rejected because ERLs are primarily designed to provide rapid assistance to help to restore critical infrastructure damaged as the consequence of a natural disaster, and are therefore not suited to the broad, long-term goal of designing and implementing a comprehensive disaster risk management strategy.

Scope of the project. The inclusion of specific relief and recovery activities, in particular for “livelihood recovery”, was considered. This was rejected because such support would be mostly to provide “private goods” and many NGOs and mass organizations are active and have a clear comparative advantage in these types of activities. Consideration was also given to supporting a single-sector project with broad objectives, such as an irrigation or water resources project, under which specific components would support disaster management. This was rejected because an effective disaster risk management strategy requires a multi-sector approach, more suited to a stand-alone investment operation focusing exclusively on supporting the Government’s natural disaster risk management strategy.

Contingency Funding and Budgetary Support. The option of a “Contingency Funding Facility” providing readily available budgetary support was explored, in particular in the context of a Development Policy Loan (DPL) with a Deferred Drawdown Option (DDO). However, this option was rejected by the Government because it would incur costs (interest or commitment charges) and only cover low-frequency hazards, which might not happen during the project’s lifespan. Instead, agreement was reached on the idea to develop a rapid disbursement facility
which might also apply to lower-level localized disasters, utilizing to the extent possible the existing country system for post-disaster reconstruction and, at the same time, paving the way for future direct support to the Government’s budgetary system through an integrated institutional strengthening program.

C. IMPLEMENTATION

1. Partnership arrangements

The proposed project is envisioned within the framework of the NDMP and is fully consistent with the objectives and strategy of its Second Phase, supported by the UNDP, RNE, AusAID, the Embassy of Luxembourg and the Swedish International Development Agency (SIDA). The proposed project would also benefit from many activities supported by the NDMP, including: (a) improved coordination between Government, donors and NGOs; (b) capacity building; and (c) information and knowledge sharing. In addition, two of the pilot natural disaster mitigation sub-projects identified and prepared under the NDMP have been included in the list of sub-projects under Component 1.

2. Institutional and implementation arrangements

Project Coordination

The Central Committee for Flood and Storm Control (CCFSC), which is chaired by a Deputy Prime Minister, would provide overall strategic, policy and technical guidance to ensure that project implementation is consistent and fully in line with the SNS. The CCFSC would coordinate among Government agencies to facilitate the implementation of the project. Coordination activities would include preventive and mitigation planning among sectors, mobilization of necessary resources to prepare investment proposals, project information dissemination and training activities in the field of natural disaster risk management.

A high-level Project Steering Committee (PSC) with MARD Minister or his designated Vice-Minister in charge of disaster management as chair would be established to oversee overall project implementation. Other Ministries and Agencies such as the Office of the Government (OOG), the Ministry of Planning and Investment (MPI), Ministry of Finance (MOF), MONRE, MOFI, MOT, Ministry of Health (MOH), MOET, and the State Bank of Vietnam (SBV) would be represented in the PSC. The current MARD-based Project Preparation Steering Committee, established on October 1, 2002 (Decision No. 4055/QD-BNN/TCB), should be assigned to act as the PSC given its strong involvement in the project design and the need for continuity. The PSC would convene once every six months and in special circumstances to review overall progress in project implementation and provide timely solutions to address any outstanding issues arising during the course of implementation.

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8 Hai Lang Drainage System in Quang Tri and O Lau Dyke Upgrade in Thua Thien Hue. There are three other pilot sub-projects under the Partnership which will be implemented in Binh Dinh, Da Nang and Quang Ngai provinces with UNDP and bilateral support from the Governments of Australia, Luxembourg and Netherlands.
Project Management

Executing Agencies. There are two executing agencies for the proposed project:

- **MARD would be the primary executing agency.** In Decision No. 4487-TB/BNN-VP, dated December 20, 2004, MARD designated the CPO to manage the proposed project and the Dyke Management and Storm and Flood Control Department (DMSFCD) to be responsible for appraising, guiding, supervising and monitoring the implementation of the project. MARD’s CPO, currently in charge of all foreign-funded water resources projects, including two Bank-assisted water resources projects, would be entrusted with the overall project day-to-day management activities.

- **The second executing agency would be the MOF** which would be responsible for the implementation of Component 3 of the project with the involvement and support of various departments including State Budget, State Treasury and External Finance Departments.

Central Project Management Office (CPMO). At the central level, a CPMO would be established within CPO and led by a designated CPO Deputy Director to take charge of project implementation and coordination. CPMO would be responsible for overall project implementation planning and budgeting, coordination with government line ministries, operation of the main Special Account (SA), preparation of consolidated quarterly project management reports (PMR), and resettlement, environment and social safeguards monitoring.

Project Coordination Unit (PCU). Implementation of non-MARD sub-projects would be the responsibility of the respective line ministries. For the Mekong River Delta Flood Warning and Monitoring System (Year 1 sub-project), MONRE would decentralize project management to the Southern Station for Hydro-Meteorology. For non-MARD sub-projects in subsequent years, existing Project Management Units (PMUs) would be responsible for implementation. For instance, MOT would designate the existing Railways Projects Management Unit to implement the Railway Drainage System listed as a potential sub-project post-Year 2. Similarly, the existing Road Projects Management Unit No. 7 would be responsible for the Mekong Delta Road Flood Protection sub-project if selected for implementation under the proposed project. For Component 3, a PCU would be established within MOF. During negotiations it was agreed that participating agencies could use existing PMUs for the purposes of implementing the project.

Provincial Project Management Units (PPMUs). At the provincial level, PPMUs would be established by the Provincial People’s Committees (PPCs) to take full responsibility for implementing the project at the provincial level. Given the cross-sector activities envisaged under the project, each PPMU should be put under the direct management of the PPC which will appoint a PPMU Director and key staff. In order to avoid duplication of structures and to ensure institutional sustainability, the PPMU would provide support to the Provincial Committee for Flood and Storm Control (PCFSC) which would act as the Provincial Project Steering Committee (PPSC). This Committee would assist the implementation of all project components by providing policy guidance on provincial disaster mitigation, ensuring counterpart fund resources, initiating resettlement/land compensation dialogue, and coordinating with other provincial departments to support the implementation of selected sub-projects within their jurisdiction. The Department of Agriculture and Rural Development (DARD) as the Standing
Office of the PCFSC and the Department of Planning and Investment (DPI) as the planning advisory entity would have key roles in assisting the PPMU in the selection and implementation of investment sub-projects.

**District/Commune level.** Mechanisms developed by the project would ensure the active participation of project districts and communes in all project activities from planning to implementation, monitoring and evaluation, and operation and maintenance. It is important that beneficiary communities should be closely involved in the identification of investment interventions, proposed technical solutions, potential impacts and social safeguard mitigation plans. Representation of communities in sub-project management boards is important to ensure that the voice of end-users is heard and reflected in the sub-project implementation program.

3. **Monitoring and evaluation of outcomes/results**

Overall monitoring and evaluation of the project would be the responsibility of CPMO, with support from the Disaster Management Center (DMC). At the sub-project level, the PPMUs would monitor local, provincial and community activities, as well as Ministry agency activities if these are located in the Ministries. The existing information structure developed for the CCFSC and its subordinate committees at provincial and district levels would serve as an established conduit for information flows. CPMO would generally obtain information from the PPMUs and the People’s Committees at the provincial, district or village level.

Monitoring should allow the CPMO and the PSC to identify problems and constraints and to take corrective measures where necessary. In addition, initial baseline surveys and mid-term and final evaluations would be carried out by independent organizations under the supervision of CPMO. Evaluation of completed sub-projects or investments (e.g., public infrastructure reconstruction under Component 3) would also be undertaken by independent monitoring agencies.

In line with the participatory nature of Component 2, there would be an important role for local institutions in monitoring. This role is described in relation to the JSDF Pilot Program, and would be formalized and articulated through the SCPs and the involvement of the communes and their local organizations in following implementation and outputs of the plans on an annual cycle.

4. **Sustainability**

The sustainability of project benefits would depend on several factors: (a) Government establishing an effective process for identifying and funding mitigation investments as part of its public investment program; (b) improving early warning and communications systems, including at the community level and along coastal areas; (c) putting into operation responsive and efficient funding mechanisms for reconstruction; (d) providing well-targeted assistance schemes to communities affected by natural disasters; and (e) building up a strong institutional framework that can coordinate a national strategy for disaster risk management both across ministries and across levels of government responsibility. The sustainability of disaster risk management at the community level would depend on effective participation in identifying mitigation measures, on
building up the skills and capacities in participatory methods, and on the communities’ ability to generate the needed revenue for operation and maintenance of small infrastructure works.

5. Critical risks and possible controversial aspects

<table>
<thead>
<tr>
<th>Table 2 – Critical Project Risks</th>
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<tbody>
<tr>
<td><strong>To Project Development Objectives</strong></td>
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<tr>
<td>Lack of Government commitment to an integrated disaster risk management approach</td>
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<tr>
<td>Inefficient coordination between central Ministries</td>
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<tr>
<td>Inefficient coordination between central and provincial government authorities</td>
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<tr>
<td><strong>To Component Results</strong></td>
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<tr>
<td>Insufficient resources allocated to strengthen preparedness capability</td>
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<tr>
<td>Improper selection of structural investments</td>
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<tr>
<td>Weak capacities at the Commune level</td>
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<tr>
<td>Lack of Government commitment to support community-driven approach</td>
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<tr>
<td>Inadequate damage assessment and slow release of contingency budget</td>
</tr>
<tr>
<td>Lack of institutional reform in key areas of Identification and Planning of Disaster Risk Management Measures</td>
</tr>
</tbody>
</table>

**OVERALL RISK LEVEL** | S |
---|---|
Risk Rating - H (High Risk), S (Substantial Risk), M (Modest Risk), N (Negligible or Low Risk)

6. Credit conditions and covenants

**Effectiveness Conditions.** Beyond the standard requirements, the following conditions would be met before credit effectiveness:

- The PSC would be established by the Borrower;
- The Project Implementation Manual (PIM), including Procurement and Financial Management Manuals, would be formally adopted by the Borrower for application by all relevant agencies;
• The CPMO would be established by the Borrower and staffed to the satisfaction of the Association;
• A PCU would be established in the Southern Regional Hydro-Meteorological (SRHMC) under MONRE and two PPMUs would be established in the Provinces of Nghe An and Ben Tre; and all three units staffed to the satisfaction of the Association; and
• The procurement and financial management staff of the CPMO, the PCU and the two PPMUs in Nghe An and Ben Tre would complete training satisfactory to the Association.

Disbursement Conditions. The following conditions of disbursement would apply for expenditures for post-disaster reconstruction support under Component 3: (a) the preparation of an Operations Manual (OM) acceptable to the Association and its adoption by the Borrower through MOF; and (b) the establishment of a PCU in MOF.

Implementation Covenants. The following covenants have been set to ensure adequate implementation and monitoring of the proposed project:

• Each Project Province where a sub-project is selected under Component 1 and each Participating Commune selected under Component 2 would establish and maintain a PMU;
• Each participating agency responsible for the implementation of a sub-project would establish and maintain a PCU staffed to the satisfaction of the Association;
• Each commune implementing CBDRM activities under Component 2 would establish a Commune CBDRM Coordination Committee (CCCC);
• Adequate policies and procedures would be maintained to monitor and evaluate project implementation and the achievement of objectives in accordance with indicators satisfactory to the Association. A plan for monitoring and evaluation would be prepared and submitted to the Association for review by June 30, 2006, and would be implemented thereafter;
• Semi-annual progress reports would be submitted to the Association for review by January 15 and July 15 of each year, beginning in January 15, 2006. These reports should contain the results of monitoring and evaluation activities performed pursuant to the monitoring and evaluation plan, beginning with the report due on January 15, 2007, and a description of the status of compliance with environmental and social safeguards;
• An annual work program and financing plan for the whole project for the next calendar year, including the list of new sub-projects under Component 1, would be submitted to the Association for review by September 30 of each year, commencing in 2006; and
• Under Component 3 of the proposed project; (a) an independent diagnostic analysis of the Government’s damage-assessment processes and post-disaster resources management procedures would be completed, in accordance with terms of reference acceptable to the Association; (b) a damage assessment specialist would be recruited by December 31, 2006, under the DMC to assist MOF and the Provinces in the implementation of the component; and (c) an independent monitoring entity, acceptable to the Association, would be engaged by December 31, 2006 to carry out annually, under terms of reference acceptable to the Association, a technical evaluation of all eligible post-disaster
reconstruction as well as an ex post review of all direct contracts which were not subject to prior review.

Financial Covenants. The financial covenants would apply to MARD and MOF, the two executing agencies under the proposed project, in respect of maintaining an adequate financial management system including accounts and retention of records for the proposed project.

- For components 1, 2 and 4, the MARD CPMO would use the traditional disbursement method and be responsible for: (a) consolidated quarterly Financial Monitoring Reports (FMRs) for the whole project, which would be prepared by the CPMO and forwarded to the Association; and (b) consolidated accounts for the whole project, which would be prepared by CPMO for annual auditing by independent auditors acceptable to the Association. The auditor’s reports would be submitted to the Association within six months of the close of each fiscal year;
- For component 3, the MOF PCU would use the report-based disbursement method and would be responsible for: (a) submitting quarterly FMRs; and (b) submitting an annual financial statement to the CPMO.

Environment and Social Covenants. The following covenants have been set to ensure that the proposed project fully complies with the Bank’s environmental and social safeguards policies:

- All project activities would be carried out in accordance with the guidelines developed in the approved Environmental Assessment Reports and any Environmental Management Plan prepared accordingly;
- All project activities would be carried out in accordance with the Resettlement Policy Framework approved by the Government and any Resettlement Action Plan prepared accordingly; and
- All project activities would be carried out in accordance to the Ethnic Minorities Policy Framework adopted by the Government and any Ethnic Minorities Development Plan prepared accordingly.

D. APPRAISAL SUMMARY

1. Economic and financial analyses

The economic benefits of investments in disaster mitigation are mainly derived from reduced losses when catastrophic events occur. While assessing the economy-wide losses arising from natural disasters is challenging due to poor quality of data, an analysis carried out during project preparation estimates that direct material losses to the capital stock was over US$2.5 billion in the period 1994-2004. If indirect costs are added, the total economic losses would be much greater through the multiplier effects from the disruption of productive economic activities.

A conventional cost-benefit analysis method may be inappropriate to evaluate investments in prevention and post-disaster recovery activities since there are no empirical data to quantify the direct correlation between pre-disaster investments in mitigation and reduced losses. Nevertheless, experiences of more advanced countries confirm that prior investments in
enhancing disaster response capability and reducing vulnerability yield extensive returns in terms of property damage avoided and lives saved. While an aggregated Internal Rate of Return (IRR) for the overall project has not been estimated since it is impossible to predict future disasters and their impact in advance, being one of Vietnam’s first initiatives to introduce integrated disaster management on a large scale, the project is expected to generate large payoffs. As a relevant reference, a case study in Latin American on non-structural investments similar to those proposed under Component 1 indicated an economic IRR of 25 percent or more.

Mitigation investments (structural and non-structural) under Components 1 and 2 have been identified on the basis of their expected high impact in reducing losses in property and helping to save human life. These components are also targeted to be implemented in areas with the highest disaster probability. During implementation, a cost-benefit analysis will be carried out for each sub-project under Component 1. For future sub-projects on structural investments, probability-based cost-benefit analyses have been carried out. They resulted in economic IRRs ranging between 17-37 percent.

2. Technical

The project raises no major technical issues. It would finance a range of conventional mitigation investments in different sectors as well as small infrastructure works at the community level, technical assistance and training, and emergency reconstruction works through the use of the Contingency State Budget. For most of these works, the sector ministries responsible for implementation have qualified and experienced technical staff; in most cases, they also have prior experience with IDA-financed projects, especially in MARD where the Dyke Department and Construction Units have managed related IDA-financed investments in irrigation and flood control. However, for medium-size structural investments and for certain specialized non-structural measures (such as early warning systems, hazard mapping and flood modeling) there is a need for outside consultants to review pre-feasibility and feasibility reports, to help in the preparation of bidding documents, and more generally to provide on-the-job training in these new areas of expertise for Vietnam.

At the community level, technical capacity is more limited. While the community-based disaster management component would implement a wide range of small infrastructure works or improvements to existing facilities as well as some non-structural measures, it would require considerable training at the community level and support in planning, design and implementation by district level technical specialists.

3. Fiduciary

Procurement Planning. A procurement plan for the first 18 months of project implementation was prepared by the Project Preparation Unit (PPU) and has received the Association’s no-objection.

Procurement capacity assessment. The assessment of the procurement capacities of the main implementing agencies has been completed. Key issues to be addressed include the limited experience with competitive bidding in accordance with Bank Guidelines, the high-risk public
procurement environment and the lengthy approval processes within MARD, higher levels of Government and local government. The following actions to strengthen the project’s procurement implementation capacity have been agreed with the PPU and CPO:

- Identification of a Project Director and key CPMO staff, including a senior procurement officer and a senior accountant. These staff would provide necessary procurement assistance and supervision to other agencies;
- Formal establishment of the CPMO, SRHMC-PMU and the PPMUs for the two provinces with Year 1 sub-projects by the date of Credit effectiveness;
- Staffing of the CPMO, SRHMC-PMU and PPMUs with at least one procurement officer each by Credit effectiveness; and
- Procurement training for SRHMC-PMU and PPMUs by Credit effectiveness.

Financial Management Assessment. The financial management review and analysis has concluded that this project meets the minimum requirements of the Bank’s OP/BP10.02. Identified weaknesses, including those relating to the appointment and capability of financial staff, and operational and financial procedures for implementation and reporting, would be addressed through an agreed financial management action plan designed to ensure adequate financial management capacity for project implementation.

Financial Management System. The CPO, through the CPMO within MARD, would be responsible for the coordination and supervision of the project’s financial management. The project would operate with five SAs.

- For components 1, 2 and 4, the CPMO would use the transaction-based disbursement method with four Special accounts (for IDA Credit, PHRD Grant, a bilateral grant, and JSDF Grant) and would be responsible for: (a) preparing consolidated quarterly Financial Monitoring Reports (FMRs) for the whole project, and forward to the Association; and (b) consolidated accounts for the whole project for annual auditing by independent auditors acceptable to the Association. The auditor’s reports would be submitted to the Association within six months of the close of each fiscal year;

- For component 3, the MOF PCU would manage the fifth Special Account (for IDA Credit) using the report-based disbursement method and would be responsible for: (a) submitting quarterly FMRs; and (b) submitting an annual financial statement to the CPMO. The MOF would channel funds to the relevant Provincial State Treasury upon government decisions on post-disaster reconstruction and would produce quarterly FMRs for submission to the CPO.

Details of financial management arrangements are presented in Annex 7.

Retroactive Financing. Retroactive financing would be permitted for payments made after August 1, 2005 up to a total of US$0.5 million equivalent for Components 1, 2 and 4 managed by MARD. The procurement procedures should be in accordance with the Procurement Guidelines in order for the eventual contracts to be eligible for retroactive financing, and the normal review process by the Association should be followed.
4. Social

Social Assessment. A detailed Social Assessment was conducted during project preparation (see project files, Vietnam Natural Disaster Mitigation Project, Social Assessment, dated January 2004) and the results of the assessment were incorporated into the detailed design of sub-projects. Both OP 4.12 (on Involuntary Resettlement) and OD 4.20 (on Indigenous Peoples) apply to the project. Measures to address the safeguard issues are mentioned under Section D.6. on Safeguards Policies.

Benefits and Target Population. The proposed project would assist in reducing the human suffering and economic costs of natural disasters by supporting investments that reduce the country’s vulnerability to recurring natural hazards. It is expected that strategic investments in disaster mitigation and improvements in institutional preparedness would reduce overall physical damage and loss of life in the Central and Mekong Delta regions of Vietnam. Economic and social disruptions following natural disasters would be reduced. The potential beneficiaries live in 17 hazard-prone provinces constituting the Program area. They comprise upland, lowland coastal and inland communities who primarily derive their livelihoods from farming (wetland, cash crops and subsistence), fishing (shrimp cultivation and off-shore fisheries), and small businesses (food stalls, basic provisions).

Ethnic minorities. Ethnic minority people comprise a substantial number of the project’s beneficiaries and capacity-building efforts would be needed for them to fully participate in and benefit from the project. This is addressed by the Ethnic Minority Policy Framework (EMPF) which provides guidance for measures (additional consultations and capacity development) to ensure that activities for sub-components are tailored to the expressed needs of the ethnic minorities.

Gender. Gender considerations have been included in Component 2 on CBDRM and in other components and project activities, especially in Component 4, to ensure that both women and men have equal opportunities as participants and beneficiaries of the project.

Community Participation. As part of the preparation of Component 2, extensive field consultation was carried out in ten communes (of the 83 identified). These included: (a) consultations with the local communities and NGOs to define the appropriate approach for CBDRM; (b) consultations with all levels of People’s Committees to identify the needs and interest of the beneficiaries, their vulnerability to natural hazards and their poverty level; and (c) assessment of risk management training needs of local communities and the identification of a positive list of mitigation activities, including the costs of specific small civil works. The results of these activities have been included in the project design.

5. Environment

The project is rated as Environmental Category A. An independent environmental consultant prepared the following documents for the environmental review: an overview Environmental Assessment (EA) for the entire project, individual EAs for the two structural sub-projects and one non-structural sub-project under Component 1, and an EA for the community-based
investments under Component 2. There is not yet an environmental review of activities under Component 3 because the investments would be identified after the project starts. Each of these investments would be subject to an environmental screening and assessment in accordance with Bank and Government requirements, as further developed in the Operations Manual for Component 3.

The project’s potential adverse environmental impacts would be mitigated through implementation of project-specific Environmental Management Plans (EMPs), prepared in accordance with OP 4.01 on Environmental Assessment. The EMPs would include mitigation measures, monitoring indicators, a monitoring plan and institutional responsibility for EMP implementation. The CPMO would monitor EMP implementation and compile sections on environmental compliance in the progress reports to be submitted to the Bank. The EAs/EMPs would address all environmental issues and comply with Government and Bank environmental regulations, policies and procedures.

6. Safeguard policies

<table>
<thead>
<tr>
<th>Safeguard Policies Triggered by the Project</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Assessment (OP/BP/GP 4.01)</td>
<td>[X]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Natural Habitats (OP/BP 4.04)</td>
<td>[X]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Pest Management (OP 4.09)</td>
<td>[ ]</td>
<td>[X]</td>
</tr>
<tr>
<td>Cultural Property (OPN 11.03, being revised as OP 4.11)</td>
<td>[ ]</td>
<td>[X]</td>
</tr>
<tr>
<td>Involuntary Resettlement (OP/BP 4.12)</td>
<td>[X]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Indigenous Peoples (OP 4.20, being revised as OP 4.10)</td>
<td>[X]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Forests (OP/BP 4.36)</td>
<td>[ ]</td>
<td>[X]</td>
</tr>
<tr>
<td>Safety of Dams (OP/BP 4.37)</td>
<td>[X]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Projects in Disputed Areas (OP/BP/GP 7.60)</td>
<td>[ ]</td>
<td>[X]</td>
</tr>
<tr>
<td>Projects on International Waterways (OP/BP/GP 7.50)</td>
<td>[ ]</td>
<td>[X]</td>
</tr>
</tbody>
</table>

Environmental Assessment (OP 4.01). EAs have been prepared for the investments planned for implementation in the Year 1 of the project. Environmental screening and review procedures would be prepared for future investments.

Natural Habitats (OP 4.04). The Ba Tri sea dyke triggers the Bank’s OP on Natural Habitats. The dominant habitat types in the project impact area are aquaculture ponds (4,000 ha) and salt pans (650 ha), with smaller areas of mangrove plantations. There are remnants of natural mangrove forests, largely as scattered individual trees, and semi-natural mangrove forests are located in narrow fringes along water courses. Inter-tidal mud and sandy flats cover up to

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9 The environmental assessment for Component 2 will apply to the Pilot CBDRM Program financed by the JSDF Grant.
10 By supporting the proposed project, the Bank does not intend to prejudice the final determination of the parties’ claims on the disputed areas.
several thousand hectares along the coast and provide feeding habitats for a number of sensitive
bird species. Eight species of birds considered threatened or nearly so were observed in the salt
pans and inter-tidal mud flats around the project area in 2000 (Birdlife International, 2003).

Although the project would not have a direct impact on all of these habitats, it would result in the
loss of up to 15 ha of mangrove forest. The project would also create disturbance to wildlife as a
result of construction and associated noise and would potentially result in increased hunting
pressures on the birds that utilize the habitats in the project area. The mitigation measures for
this sub-project include the establishment of a community-based monitoring and protection
system for the important habitats within Important Bird Areas. The mitigation would be
financed by the project over a period of four years.

For Components 2 and 3, environmental screening procedures have been developed that would,
inter alia, ensure that natural habitats are not significantly affected. The same screening
procedures would be used for Component 2 and for the Pilot CBDRM Program.

**Involuntary Resettlement (OP/BP 4.12) and Indigenous Peoples (OD 4.20).** The following
documents have been prepared, in accordance with OP 4.12 and OD 4.20:

- *Resettlement Policy Framework (RPF) and the EMPF* which describe the resettlement
  and ethnic minorities strategies adopted by the proposed project. The involuntary
  resettlement policy framework covers all possible adverse impacts caused by the taking
  of land (acquisition) for the project. The EMDF ensures that in the project design: (a)
  ethnic minorities would benefit from development projects; and (b) the project would
  avoid or mitigate potentially adverse effects on ethnic minorities caused by the project.

- *Resettlement Action Plans (RAPS) and Ethnic Minority Development Plans (EMDPs)*
  for sub-projects where land acquisition is expected to take place for the Year 1 investments
  have also been prepared in accordance with Bank safeguard policies.

**Dam Safety (OP 4.37).** The Vuc Mau sub-project triggers the Bank's safeguard policy on Dam
Safety (OP 4.37). The task team includes individuals who have relevant experience in dam
engineering and in the preparation and supervision of Bank-funded projects that have included
dams. A feasibility study has been prepared by the borrower and reviewed by the task team.
During implementation, the task team would: (a) review the design and investigation reports and
procurement documents; and (b) monitor construction activities as required by OP 4.37.
Necessary dam safety plans would be prepared during implementation. MARD will establish a
Dam Safety Unit (DSU) through the existing Vietnam Water Resources Assistance Project
(VWRAP) which would assist and provide guidance in the preparation of the dam safety plans.
A Dam Safety Panel has been established under VWRAP which would review work related to
Vuc Mau as required.

7. **Policy Exceptions and Readiness**

No policy exceptions are required.
Annex 1: Program Background

VIETNAM: Natural Disaster Risk Management Project

A. COUNTRY AND SECTOR ISSUES

Development Context

Vietnam is one of the most disaster-prone countries in the world. Because of the country's geographic position and topography, it suffers from typhoons, tropical storms, floods, drought, seawater intrusion, landslides, forest fires, and occasional earthquakes. Disasters triggered by typhoons and floods are by far the most frequent and severe. With around 70 percent of the population living in lowland areas in the Red River and Mekong deltas and along the 3,200 km of coastline, these disasters often result in human casualties, important economic losses and environmental damage.

Natural disasters worldwide are becoming more damaging and more complex to handle, and weather-related disasters are apparently increasing in frequency. The current reforms in disaster risk management in Vietnam, including those supported under this project, were spurred by excessively high losses in a series of disasters in the years 1996-2000. During that period, major flooding occurred along the Red River, a severe typhoon struck the coastal area of Southern Vietnam with extensive loss of life, heavy rains inundated large areas of Central Vietnam, and severe flooding occurred in the Mekong Delta. The worst disaster occurred in 1999, when more than 800 people died and damage to the capital stock was in excess of US$300 million. In late 2000, Mekong Delta floods resulted in damage estimated at about US$250 million.

Natural disasters in the decade to 2004 claimed almost 6,000 lives in Vietnam, completely destroyed over 320,000 houses and almost 9,000 boats; they resulted in direct material losses to the capital stock of over US$2.5 billion in the period 1994-2004, corresponding to an average of 5 percent of gross annual capital formation (and as high as 12 percent in the worst years). Total economic losses, taking into account disruption effects on productive economic activities, could be up to double this amount (see Annex 9).

Table 3 – Direct losses due to natural disasters in Vietnam 1994-2004

<table>
<thead>
<tr>
<th></th>
<th>Deaths</th>
<th>USSM Losses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>200</td>
<td>400</td>
</tr>
<tr>
<td>1995</td>
<td>400</td>
<td>800</td>
</tr>
<tr>
<td>1996</td>
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<td>1,200</td>
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<td>1997</td>
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<td>1998</td>
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<tr>
<td>1999</td>
<td>1,200</td>
<td>2,400</td>
</tr>
<tr>
<td>2000</td>
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</tr>
<tr>
<td>2001</td>
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<td>2002</td>
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<td>2003</td>
<td>2,000</td>
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</tr>
<tr>
<td>2004</td>
<td>2,200</td>
<td>4,400</td>
</tr>
</tbody>
</table>

Source: MARD and World Bank, interpolated where necessary
Although Vietnam has experienced fewer losses in the last five years (see Table 3), longer term trends suggest that periods of severe hazards will be repeated. Whether future hazard events will be disasters depends very much on the response of Vietnam to the proactive measures that can and should be taken now.

**Regional Disaster Areas**

There are three distinct regions of the country with different types of water-related disasters and with historically different approaches to disaster mitigation and management:

- In the **Northern** part of the country, within the Red River Basin shared with China, and in the Red River/Thai Binh River Delta, large and rapid changes in flood water levels can occur. This region is protected against flooding by major river dyke (levee) and sea dyke (coastal protection) systems that have been built and added on to for over one thousand years;

- In the **Central** part of the country, each province is, in effect, a separate river basin. Due to the sharp fall in elevation from the highlands, river flooding can be so rapid that it causes flash flooding. This region has historically used a river basin-wide approach to protect itself against water-related disasters; and

- In the **Southern** part of the country, in the Mekong Delta, changes in river level of just a few centimeters during the annual monsoon rains can flood vast areas because of the flat topography. Little has been done historically to protect against this flooding, other than learning to live with the floods and to use regular normal flooding for agricultural purposes which generate considerable economic advantage.

Non-flood related disasters also occur in some regions. Droughts are common in the Central Highlands. Fires also occur regularly, particularly forest fires in the highland areas caused by slash-and-burn cultivation. Earthquakes occur only rarely but are most likely to affect the northern mountainous area of the country. The types of disasters by region are summarized below.

**Table 4 – Type of Natural Disasters by Regional Areas**

<table>
<thead>
<tr>
<th>Region</th>
<th>Disaster Zones</th>
<th>Principal Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>North</td>
<td>Northern Upland</td>
<td>Flash floods, landslides, earthquakes</td>
</tr>
<tr>
<td></td>
<td>Red River Delta</td>
<td>Monsoon river floods, typhoons, storm surges</td>
</tr>
<tr>
<td>Center</td>
<td>Central Provinces</td>
<td>Typhoon storms, flash floods, drought</td>
</tr>
<tr>
<td></td>
<td>Central Highlands</td>
<td>Flash floods, landslides</td>
</tr>
<tr>
<td>South</td>
<td>Mekong Delta</td>
<td>River flooding from upstream, typhoon, storms along the coast</td>
</tr>
</tbody>
</table>

*Source: UNDP Project Document, VIE/01/014/01*
**Government Strategy for Disaster Mitigation**

**Government Strategy and Action Plan for Mitigating Water Disasters.** In 1994, the Government prepared a Strategy and Action Plan for Mitigating Water Disasters in Vietnam. This makes it one of a handful of developing countries worldwide to have adopted such a Strategy. The Strategy was based on the themes of forecasting and warning, prevention, preparedness and emergency relief.

**Preparing a new Disaster Risk Management Strategy.** Disaster Risk Management is now a priority of the Government's development agenda. The Government has drafted its Second National Strategy for Disaster Management. The draft Second Strategy evaluates the effectiveness of the original strategy and sets out the strategic direction for the future. The revised strategy gives greater credence and attention to preparedness and medium-term recovery. It also recognizes the links between the impact of disasters and poverty, and disasters and the environment, as well as focusing more closely on the nexus between disasters and the progress of sustainable development. The draft Second Strategy retains the earlier concept of the "Disaster Cycle" while upgrading the preparedness functions and, in particular, mentions disaster planning based on multi-hazard identification and risk assessment as its first basic principle.

**National Strategic Goals to be achieved by the Year 2010.** To achieve the goal of making Vietnam a country safe from disasters by the year 2020, the following objectives, set out in the draft Second Strategy, would need to be met in the 2001-2010:

- Continue to improve community awareness and local participation to ensure that people live and work in disaster-safe communities;
- Minimize the number of people killed and injured. The number of 800 deaths per year in the 1990s should be reduced to 200 deaths per year in the decade 2001-2010;
- Reduce direct economic losses caused by disasters from an average of two percent of GDP in the 1990s to below one percent of GDP in the decade from 2001-2010;
- Minimize negative impacts caused by disasters on poverty, the environment, sustainable development, equitable development and cultural heritage.

**Basic Components of the Draft Second Strategy.** To realize the four strategic objectives given above, the draft strategy sets out the following components:

- Conduct disaster identification, disaster risk assessment, and disaster damage assessment for all types of disasters;
- Undertake and apply research, use technological innovations, disseminate knowledge on technical solutions, methods and measurement, and strengthen organizations for reduction of disaster risk, impacts and losses;
- Transfer technology to experts and supply information to leaders and decision-makers at all levels of government and to the general public; and

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• Mobilize all resources including labor, materials, science and technology, financial resources, incentive mechanisms and policies to: (a) use disaster mitigation for poverty reduction, environment protection, and sustainable and equitable development; and (b) organize and direct coordination activities prior to, during and after disasters.

**Comprehensive Poverty Reduction and Growth Strategy (CPRGS).** Vietnam’s CPRGS highlights disaster mitigation as an important strategy within a broader approach to poverty reduction. Identifying disaster-prone zones as some of the main areas of high poverty in the country, and exposure to natural hazards as one of the main causes of instability in the lives of poor rural families, the Action Plan against poverty (dated May 2002) outlines detailed infrastructure and social programs intended to minimize losses and stabilize livelihoods and household production in disaster-prone areas.

**B. STRATEGIC FRAMEWORK**

**A Systems Approach to Natural Disaster Risk Management.** A systems approach would be used under the proposed project, consistent with the draft Strategy, to strengthen the relationships between the three main elements in the management of natural disasters: (a) Prevention and Mitigation, before the disaster; (b) Response, during the disaster; and (c) Reconstruction and Recovery, after the disaster. All activities within the Prevention-Response-Recovery processes and their mutual links are illustrated in Figure 1 below.

Figure 1, adopted from the Project Preparation Report, reflects and summarizes the framework of the draft Strategy. In particular, the concepts implied in the diagram address key shortcomings in the First National Strategy that are dealt with in the new Strategy where:

• Sufficient attention is given to preparedness and longer-term recovery;
• The input of multi-hazard assessment and risk analysis into this process is seen as critical;
• The fundamental link between disasters and the economy, and the negative consequences of disasters for sustainable development, is recognized;
• The increasing severity of disasters as a result of urbanization, industrialization and agricultural practices in marginal lands is realized;
• The nexus between environmental degradation and increased disasters is becoming increasingly clear; and
• The importance of a “grass-roots”, community-based approach to obtain the best risk-treatment solutions is acknowledged.

The process described in Figure 1 recognizes the way in which the disaster risk management process, along with community-based imperatives (Prevention and Mitigation activities), provides important and necessary input into both the Response, and the Recovery and Reconstruction areas. It also demonstrates how planning for development, post-disaster damage assessment, and lessons learned are closely linked activities which, when integrated, can lead to safer, more economical and sustainable outcomes in national and local development.
Disaster risk management requires mainstreaming of risk management in the development plans of the central and local (i.e., province and district) authorities. Mainstreaming risk management is closely related to integrated water resources management and should be dealt with in the context of water system approaches (for example, of river basins or coastal zones). The proposed project would support integrated water resources management by focusing on system-wide approaches. For example, any structural measures along the coastline would be tested within the wider system in order to avoid creating additional negative effects on neighboring areas, including the effect of any significant upstream structural measure on downstream areas. Similarly any structural or non-structural measures along the coastline would be assessed against the calculated effects of upstream structural measures.

C. RESPONSE TO MASSIVE AND UNUSUAL NATURAL DISASTERS

Extreme cyclones and other types of disasters

**Extreme cyclones.** Extreme cyclones, or even cyclones that occur in unusual locations, such as Typhoon Linda in 1997, which caused huge loss of life and livelihood amongst fishing communities in the remote southern provinces of the Mekong Delta, are rare but catastrophic events. Activities to be supported under the proposed project include improving ocean search and rescue capabilities and early warning meteorological systems. Predictive storm modeling
can achieve much in raising awareness of the likelihood and impact of these events ahead of time.

**Earthquakes.** Although generally low for Vietnam, the chances of earthquakes are highest in the northern mountainous areas. The nearby Red River delta is most vulnerable, even to a moderate-sized shallow earthquake, not because the level of hazard is particularly high but because of the sheer amount of investment in housing, infrastructure and industry in the region, the inappropriate methods of construction and the lack of enforcement of earthquake provisions in building codes, and the potentially unstable foundation conditions. Much can be achieved, however, through awareness and the development, practice and enforcement of adequate building codes.

**Tsunamis.** At the end of 2004, a catastrophic tsunami generated by a Richter magnitude 9 undersea earthquakes offshore Sumatra in Indonesia proved capable of devastating communities hundreds of kilometers away around the Bay of Bengal and Indian Ocean. Although Vietnam is at low risk from locally-sourced tsunamis, the 2004 Indian Ocean tsunami has demonstrated that comparable undersea earthquakes in the vicinity of the Philippines are capable of wreaking enormous damage even as far away as Vietnam’s southern and central coastal communities and harbors. Such events should not come as a surprise: modern knowledge of tectonic plate boundaries and areas of stress combined with numerical ocean modeling is capable of pinpointing potential trouble-spots to feed into long-term strategies for coastal dwellers; early warning systems can be upgraded to take advantage of as much as two hours warning of such an event.

**Activities to be supported by the Project**

Although the proposed NDRMP would focus primarily on flood and storm control, a number of activities would strengthen Vietnam’s ability to cope with and respond to extreme events, including:

- **Public awareness and information campaign.** In all of these situations of potential peril described above, perhaps the most important aspect, apart from understanding the problem widely at the administrative level, is taking the message to the level of the community;

- **Institutional strengthening.** The following aspects in particular will be further strengthened: development of asset databases, predictive numerical modeling; early warning systems, enforcement of building codes, awareness and education, and the delivery of the message at the community level and the input of the community to the solutions of the problems of disasters; and

- **Arrangements for scaling-up post-disaster reconstruction support.** Component 3 is designed to address a recurrent financing gap in public resources available to fund reconstruction costs associated with natural hazards, including lower-level localized disasters. The allocation of IDA funding to Component 3 is relatively limited, reflecting this objective. However, additional IDA funding could be channeled through broadly the same institutional arrangements and procedures in the event of a major disaster, strengthening the speed and effectiveness of the Bank’s response to major events.
Annex 2: Major Related Projects Financed by the Bank and/or other Agencies

**VIETNAM: Natural Disaster Risk Management Project**

<table>
<thead>
<tr>
<th>Bank-financed Projects</th>
<th>Supervision Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Emergency Response Projects</strong></td>
<td></td>
</tr>
<tr>
<td>Vietnam – Avian Influenza Emergency Recovery (Cr. 3969)</td>
<td>Support of the National Action Plan for the control of Avian Influenza Epidemic</td>
</tr>
<tr>
<td>Grenada – Hurricane Ivan Emergency (Cr. 4001)</td>
<td>Reconstruction and rehabilitation</td>
</tr>
<tr>
<td><strong>Disaster Reconstruction Projects</strong></td>
<td></td>
</tr>
<tr>
<td>Iran - Bam Earthquake Emergency Reconstruction Project (Ln. 4755)</td>
<td>Reconstruction and emergency preparedness</td>
</tr>
<tr>
<td>Djibouti - Flood Emergency Rehabilitation (Cr. 3977)</td>
<td>Rehabilitation and recovery after flood</td>
</tr>
<tr>
<td><strong>Development and Disaster Prevention Projects</strong></td>
<td></td>
</tr>
<tr>
<td>Vietnam – Mekong Delta Water Resources Management (Cr. 3198)</td>
<td>Promote agricultural (including aquaculture) production and reduce rural poverty through improved irrigation and drainage</td>
</tr>
<tr>
<td>Vietnam – Mekong Transportation and Flood Protection (Cr. 3448)</td>
<td>Transportation and Flood Control</td>
</tr>
<tr>
<td>Vietnam – Coastal Wetlands Protection and Development (Cr. 3292)</td>
<td>Re-establish the coastal mangrove wetland ecosystems and their aquatic nurturing and coastal protection functions</td>
</tr>
<tr>
<td>Vietnam – Water Resources Assistance (Cr. 3880)</td>
<td>Management of water resources and reduce dam safety risks</td>
</tr>
<tr>
<td>Kyrgyz Republic - Disaster Hazard Mitigation (Cr. 0960)</td>
<td>Disaster hazard mitigation</td>
</tr>
<tr>
<td>Romania - Hazard Risk Mitigation and Emergency Preparedness (Ln. 4736)</td>
<td>Reduce vulnerability to disasters</td>
</tr>
<tr>
<td>Nicaragua - Natural Disaster Vulnerability Reduction (Cr. 3487)</td>
<td>Institutional capacity building for disaster management</td>
</tr>
<tr>
<td>Tonga - Cyclone Emergency Recovery and Management (Cr. 3647)</td>
<td>Rehabilitation and risk management</td>
</tr>
<tr>
<td>Honduras - Natural Disaster Mitigation (Cr. 3361)</td>
<td>National and Municipal disaster management</td>
</tr>
<tr>
<td><strong>Vietnam Community-based Projects</strong></td>
<td></td>
</tr>
<tr>
<td>Vietnam – Community-based Rural Infrastructure (Cr. 3532)</td>
<td>Rural infrastructure</td>
</tr>
<tr>
<td>Vietnam – Northern Mountains Poverty Reduction (Cr. 3572)</td>
<td>Improve infrastructure and social services at the commune and district levels</td>
</tr>
</tbody>
</table>

S = Satisfactory; L = Likely; SB = Substantial; M = Modest; NR = Not Rated
* — Implementation progress; † — Development objective
<table>
<thead>
<tr>
<th>Completed</th>
<th>Sector Issue</th>
<th>OED Evaluation</th>
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<tbody>
<tr>
<td><strong>Emergency Response Projects</strong></td>
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<tr>
<td>China – Guangdong Agricultural Development and Earthquake Reconstruction Program Project (6/99) – (Ln. 3169)</td>
<td>Disaster Relief and Reconstruction</td>
<td>S</td>
</tr>
<tr>
<td>Indonesia – Flores Earthquake Reconstruction Project (5/99) – (Ln. 3589)</td>
<td>Emergency Aid and Reconstruction</td>
<td>S</td>
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<tr>
<td>Bangladesh – Emergency Flood Recovery Project (12/00) – (Cr. 3144)</td>
<td>Disaster response project</td>
<td>HS</td>
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<tr>
<td>Algeria – Mascara Emergency Reconstruction Project (5/02) – (Ln. 3813)</td>
<td>Disaster response project</td>
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<tr>
<td>Zimbabwe – Emergency Drought Recovery and Mitigation Project (12/95) – (Cr. 2399)</td>
<td>Drought relief project</td>
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<tr>
<td>Honduras and Nicaragua – Hurricane Emergency Projects (12/00) – (Cr. 3159)</td>
<td>Disaster response project</td>
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<tr>
<td><strong>Disaster Reconstruction Projects</strong></td>
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<td></td>
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<tr>
<td>India – Andhra Pradesh Cyclone Emergency Reconstruction Project (6/95)</td>
<td>Reconstruction project</td>
<td>U</td>
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<tr>
<td>Tajikistan – Emergency Flood Assistance Project (6/02) – (Cr. 3123)</td>
<td>Disaster rehabilitation project for repair &amp; reconstruction of infrastructure damaged by floods.</td>
<td>U</td>
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<tr>
<td>Turkey – Emergency Earthquake Recovery Loan (EERL) Project (6/01) – (Ln. 4518)</td>
<td>Administration of loans for reconstruction only</td>
<td>S</td>
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<td>Turkey – Earthquake Rehabilitation and Reconstruction Project (2/01) – (Ln. 3511)</td>
<td>Disaster rehabilitation project</td>
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<td>Argentina – Flood Rehabilitation Project (6/00) – (Ln. 3521)</td>
<td>Rehabilitation project</td>
<td>S</td>
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<tr>
<td>Paraguay – Private Sector Development and El Nino Project (6/02) – (Ln. 3774)</td>
<td>Disaster rehabilitation project</td>
<td>S</td>
</tr>
<tr>
<td>Bolivia and Ecuador – El Nino Emergency Assistance Projects (6/01) – (Cr. 3057)</td>
<td>Rehabilitate and reconstruct damaged infrastructure and restore agricultural productivity.</td>
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<tr>
<td>Bangladesh - Coastal Embankments</td>
<td>NA - Closed 1999</td>
<td>NA NR</td>
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<tr>
<td><strong>Disaster prevention projects</strong></td>
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<tr>
<td>Yemen – Taiz Flood Disaster Prevention and Municipal Development Project (6/99) – (Cr. 2160)</td>
<td>Flood control works &amp; institutional strengthening</td>
<td>S</td>
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<tr>
<td><strong>Multi-purpose – Disaster management projects</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>India – Maharashtra Emergency Earthquake Rehabilitation Project (6/99) – (Cr. 2594)</td>
<td>Emergency recovery and rehabilitation</td>
<td>HS</td>
</tr>
<tr>
<td>Mexico - Natural Disaster Management Project (Ln. 7038)</td>
<td>Contingency budget management and institutional capacity building</td>
<td>U</td>
</tr>
<tr>
<td>Peru - El Nino Emergency Assistance Project (6/01) – (Ln. 4250)</td>
<td>Prevention, mitigation, emergency, reconstruction, and institutional support in the aftermath of floods and droughts.</td>
<td>S</td>
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<tr>
<td>Pipeline</td>
<td>Sector Issue</td>
<td>Delivery</td>
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<tr>
<td><strong>Multi-purpose – Disaster management projects</strong></td>
<td></td>
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<tr>
<td>Bangladesh – Water Management Improvement Project (P040712)</td>
<td>Rehabilitation of flood management infrastructure</td>
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<td>Fiji – Infrastructure and Risk Management Project (P079233)</td>
<td>Not Available</td>
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<tr>
<td>Flood Preparedness and Early Warning in Eastern Nile Project (P094268)</td>
<td>Not Available</td>
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<td>Colombia – Disaster Vulnerability Reduction (Phase 2 APL) – (P085727)</td>
<td>Not Available</td>
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<tr>
<td>India - National Cyclone Risk Mitigation Project (P092217)</td>
<td>Disaster preparedness for cyclones</td>
<td></td>
</tr>
<tr>
<td>India - Natural Disaster Capacity Building Project (P079674)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kiribati Adaptation Project (P078290)</td>
<td>Adaptation to climate change and sea level rise</td>
<td></td>
</tr>
<tr>
<td>Oeis/Barbados Catastrophe Risk Management And Insurance Reform Project (P070658)</td>
<td>Insurance and catastrophe funding tools</td>
<td></td>
</tr>
<tr>
<td><strong>Emergency Response Projects</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sri Lanka Tsunami ERL (P094205)</td>
<td>Reconstruction after tsunami</td>
<td></td>
</tr>
<tr>
<td>Maldives Post Tsunami Emergency Relief and Reconstruction Project (P094193)</td>
<td>Reconstruction and rehabilitation after the tsunami</td>
<td></td>
</tr>
</tbody>
</table>

*S = Satisfactory; L=Likely; SB = Substantial; M = Modest; NR = Not Rated
*—Implementation progress; †—Development objective
<table>
<thead>
<tr>
<th>Agency</th>
<th>Project</th>
<th>Status</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Central Region Water Resources Sector Project</td>
<td>Under preparation</td>
<td>2005 -</td>
</tr>
<tr>
<td></td>
<td>UNDP - Disaster Preparedness Program</td>
<td>On-going</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Royal Netherlands Embassy – co-financing of ADB central water resources management and flood mitigation projects</td>
<td>On-going</td>
<td>2002 – 2008</td>
</tr>
<tr>
<td></td>
<td>NDM partnership co-chair</td>
<td></td>
<td>2005 -2007</td>
</tr>
<tr>
<td></td>
<td>Luxembourg – co-financing UNDP disaster management project</td>
<td>On-going</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AusAID - River Basin management for flood mitigation &amp; community based disaster management in Quang Ngai province</td>
<td>On-going</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Financing of NGO projects</td>
<td></td>
<td></td>
</tr>
<tr>
<td>JICA/JBIC</td>
<td>JICA – Project on the improvement of higher maritime education in Vietnam</td>
<td>Completed</td>
<td>2001-2004</td>
</tr>
<tr>
<td></td>
<td>JICA – Project for rehabilitation of natural forest in degraded watershed area in northern Vietnam</td>
<td>On-going</td>
<td>2004-2006</td>
</tr>
<tr>
<td>Finland</td>
<td>Integrated rural development in Quang Tri</td>
<td>On-going</td>
<td></td>
</tr>
<tr>
<td>EU</td>
<td>DIPECHO (Disaster Preparedness Department of European Commission Humanitarian Aid Department &amp; Vietnam Red Cross)</td>
<td>On-going</td>
<td>Phase III</td>
</tr>
<tr>
<td></td>
<td>Catholic Relief Services: Disaster management project in Central Vietnam (Tinh Hue, Huang Chi, Ninh Anh) – community disaster preparedness &amp; basic infrastructure</td>
<td>On-going</td>
<td>2001- phase II</td>
</tr>
<tr>
<td></td>
<td>Oxham UK – Community based disaster management projects in Mekong Delta (AusAID funding)</td>
<td>On-going</td>
<td>2002 - 2009</td>
</tr>
<tr>
<td></td>
<td>Oxham HK – Community based disaster management project in mountainous areas</td>
<td>On-going</td>
<td>2005 - 2008</td>
</tr>
<tr>
<td></td>
<td>CARE – Community based disaster management in Mekong Delta (AusAID &amp; DIPECHO)</td>
<td>On-going</td>
<td>2003 - 2006</td>
</tr>
<tr>
<td></td>
<td>Save the Children – Flood mitigation in Mekong (Tien Giang), response and preparedness activities for children, planners and educators</td>
<td>On-going</td>
<td>2003 - 2006</td>
</tr>
<tr>
<td></td>
<td>World Vision – Integrated disaster mitigation in Quang Tri</td>
<td>Completed</td>
<td>2005-2010</td>
</tr>
<tr>
<td></td>
<td>Proposed CBDM project in Quang Ai Province (AusAID)</td>
<td>Completed</td>
<td></td>
</tr>
<tr>
<td>NGOs</td>
<td>VECI: Adaptation to climate change and disaster management in Hue</td>
<td>On-going</td>
<td>2002 – 2005</td>
</tr>
<tr>
<td></td>
<td>CBDM in Central provinces Da Nang and Binh Dinh</td>
<td>On-going</td>
<td>2004 – 2006</td>
</tr>
<tr>
<td></td>
<td>Vietnam Red Cross Society – Mangrove plantation in CBDM in northern Vietnam (8 provinces), disaster preparedness &amp; climate change (5 provinces/Dutch Red Cross), and disaster management (4 provinces/ DIPECHO &amp; Spanish Red Cross)</td>
<td>On-going</td>
<td>2005 - 2006</td>
</tr>
<tr>
<td></td>
<td>International Federation of the Red Cross : Capacity building in disaster management</td>
<td>Completed</td>
<td></td>
</tr>
</tbody>
</table>
Annex 3: Results Framework and Monitoring

VIETNAM: Natural Disaster Risk Management Project

RESULTS FRAMEWORK

<table>
<thead>
<tr>
<th>Program Purpose</th>
<th>End-of-Program Indicators</th>
<th>Use of Project Outcome Information</th>
</tr>
</thead>
</table>
| The overriding goal of the Program is to human, economic and financial losses from natural disasters and to ensure rapid post-disaster recovery of poor communities living in hazard-prone areas. | Strategic goals to be achieved by the Year 2010:  
- Continue to improve community awareness and local participation for safer life and work  
- Minimize the number of people killed and injured  
- Reduce direct economic losses caused by disasters  
- Minimize the negative impact caused by disasters on poverty, the environment, sustainable development and cultural heritage | |

PDO

<table>
<thead>
<tr>
<th>Project Outcome Indicators</th>
<th>Use of Project Outcome Information</th>
</tr>
</thead>
</table>
Disaster Management Center, as the standing office of the Central Committee for Flood and Storm Control, has been strengthened. | |

Intermediate Outcomes

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Intermediate Outcome Indicators</th>
<th>Use of Intermediate Outcome Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outcome 1: Government develops the capacity to strategically plan structural investments for disaster mitigation</td>
<td>Outcome 1: Number of provinces with completed Natural Disaster Mitigation Investment Plans</td>
<td>Outcome 1: Y1-Y2: low number of feasibility studies may flag need for further capacity building/TA.</td>
</tr>
<tr>
<td>Outcome 2: Relevant provincial and central Government agencies have institutional and technical capacity for collection, analysis and dissemination of information for risk management</td>
<td>Outcome 2: Percentage of people in targeted communities (e.g., Mekong Delta) reporting improved early warning of floods and storms</td>
<td>Outcome 2: Y1-Y4: low levels of people reporting improvements may necessitate review of information systems</td>
</tr>
</tbody>
</table>
| Outcome 3: Government develops the capacity to strategically implement structural investments for disaster mitigation | Outcome 3: Number of feasibility studies completed for sub-projects to be funded under the Program  
Number of sub-projects completed | Outcome 3: Y1-Y4: low completion of projects may flag constraints in procurement procedures, etc. |
| Outcome 4: Government adapts its approach to disaster management to include CBDRM | Outcome 4: Number of Safer Commune Plans prepared | Outcome 4: Y1-Y4: may flag insufficient attention to community mobilization and training |
| Outcome 5: Government speed and efficiency in the allocation and disbursement of post-disaster resources is strengthened | Outcome 5: Procedures for damage assessment are revised  
Allocation for post-disaster assistance is based on objective and measurable criteria  
Detailed needs assessment for the establishment of an Emergency Management Center completed | Outcome 5: Y1-Y4: slow disbursement may reflect inability of Government to institutionalize new procedures for use of Contingency Budget |

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## ARRANGEMENTS FOR RESULTS MONITORING

<table>
<thead>
<tr>
<th>Project Outcome Indicators</th>
<th>Target Values</th>
<th>Data Collection and Reporting</th>
<th>Responsibility for Data Collection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approval by the Government of the Second National Strategy and Action Plan (2001-2010)</td>
<td>n/a</td>
<td>Annual reports</td>
<td>CPMO</td>
</tr>
<tr>
<td>Central Committee for Flood and Storm Control has been strengthened (specific indicators to be defined)</td>
<td>n/a</td>
<td>Government records</td>
<td>CCFSC reports</td>
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</table>

<table>
<thead>
<tr>
<th>Intermediate Outcome Indicators</th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outcome 1:</strong> Number of provinces with completed Natural Disaster Mitigation Investment Plans</td>
<td>0</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>10</td>
<td>Annual reports</td>
</tr>
<tr>
<td></td>
<td>Annual reports</td>
<td>Review of Plans</td>
<td>PPMUs / CPMO</td>
</tr>
<tr>
<td>Outcome 2: Percentage of people in targeted communities (e.g., Mekong Delta) reporting improved early warning of floods and storms</td>
<td>0</td>
<td>10</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>Annual reports</td>
<td>Surveys</td>
</tr>
<tr>
<td></td>
<td>Annual reports</td>
<td>PPMUs / CPMO</td>
<td></td>
</tr>
<tr>
<td><strong>Outcome 3:</strong> Number of feasibility studies completed for sub-projects to be funded under the program</td>
<td>0</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>4</td>
<td>Annual reports</td>
</tr>
<tr>
<td></td>
<td>Annual reports</td>
<td>Reports</td>
<td>CPMO</td>
</tr>
<tr>
<td>Number of sub-projects completed</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>5</td>
<td>Annual reports</td>
</tr>
<tr>
<td></td>
<td>Annual reports</td>
<td>Site inspections</td>
<td>CPMO / PPMUs</td>
</tr>
<tr>
<td><strong>Outcome 4:</strong> Number of Safer Commune Plans prepared</td>
<td>0</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>40</td>
<td>Annual reports</td>
<td>Reports / field visits</td>
</tr>
<tr>
<td></td>
<td>Annual reports</td>
<td>CPMO / PPMUs</td>
<td></td>
</tr>
<tr>
<td><strong>Outcome 5:</strong> Procedures for Damage Assessment are revised</td>
<td>n/a</td>
<td>Yes</td>
<td>Annual reports</td>
</tr>
<tr>
<td>Acceptable criteria approved for prioritizing allocation of post-disaster assistance</td>
<td>n/a</td>
<td>Yes</td>
<td>Annual reports</td>
</tr>
<tr>
<td>Detailed needs assessment for the establishment of an Emergency Management Center completed</td>
<td>n/a</td>
<td>Yes</td>
<td>Annual reports</td>
</tr>
<tr>
<td></td>
<td>Annual reports</td>
<td>Reports</td>
<td>MOF / CPMO</td>
</tr>
<tr>
<td></td>
<td>Reports</td>
<td>MOF / CPMO</td>
<td></td>
</tr>
</tbody>
</table>
COMPONENT 1: PREVENTION AND MITIGATION INVESTMENTS

A. Rationale

Natural hazard events in Vietnam are varied, complex, widespread and seemingly on the rise. The potential associated negative impacts can be substantial and widespread. Public investment in structural and non-structural sub-projects is necessary to mitigate and prevent the negative impact of natural hazards. Because of the amount and range of potential or existing problems to be addressed, there is a need to consider a broader strategic approach to identifying and planning sub-project investments, taking into account regional climatic trends, disaster-prone hydrographical networks (river-basin approach), types of natural hazard and more general socio-economic factors (e.g., population density, vulnerability, levels of poverty, ethnicity, and provincial and national development strategies). Each selected sub-project should be viewed as a potentially powerful development and awareness tool, in line with the overall strategic planning at both central and provincial levels.

B. Objectives

The overall goal of this Component is to reduce disaster risks and strengthen prevention capabilities in areas most affected by flood and storm through the effective implementation of structural and non-structural measures. More specifically, the proposed component has the following objectives:

- To upgrade flood and storm monitoring, modeling and prediction capabilities through non-structural investments; and
- To improve the effectiveness of structural disaster mitigation measures for floods and storms.

C. Detailed Description and Cost

Activities supported by the project. This Component would support about seven priority medium-size structural and non-structural prevention and mitigation sub-projects.

- Structural sub-projects. Structural investments would center on construction and rehabilitation of flood and storm control infrastructure. Included in this category are rehabilitation of weirs, irrigation and drainage pumping stations, stabilization of river banks, strengthening of river and sea-dyke systems, improvement of river-flow capacity (e.g., dredging, flow-diversion weirs), construction of diversion channels, construction of safe harbors for small fishing boats, improvement of water flow along main highway and railway systems, strengthening of bridges in critical areas and construction of elevated earth pads for resettling people.
Non-structural sub-projects. The objective of the non-structural investments is to set up the basis for a system of flood and storm risk-management in priority disaster-prone areas. These sub-projects would include flood plain and hazard mapping, flood forecasting and modeling systems, restoration of ecological systems, review of building codes and design standards, weather forecasting, and early warning and response systems. While non-structural investments may potentially be applied nationwide, limited resources require the definition of priorities and a focus on specific areas to achieve maximum benefits.

Year 1 Sub-projects (Total number 3 sub-projects – estimated cost: US$29.5 million). Two structural and one non-structural sub-projects have been included in the project’s first year implementation program: (a) Vuc Mau reservoir rehabilitation in Nghe An Province (North Central Region); (b) Ba Tri sea dyke construction in Ben Tre Province (Mekong Delta Region); and (c) the Mekong River Delta Flood Warning and Monitoring System.

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Province</th>
<th>Estimated Cost (US$M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Vuc Mau Reservoir Rehabilitation</td>
<td>Structural</td>
<td>Nghe An</td>
<td>9.1</td>
</tr>
<tr>
<td>2. Ba Tri Sea Dyke Construction</td>
<td>Structural</td>
<td>Ben Tre</td>
<td>12.0</td>
</tr>
<tr>
<td>3. Mekong River Delta Flood Forecasting (MONRE)</td>
<td>Non-Structural</td>
<td>Mekong Delta</td>
<td>8.4</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>29.5</td>
</tr>
</tbody>
</table>

Potential Sub-projects Post-Year 1 (Estimated Number: 4 sub-projects – estimated cost: US$42 million). The proposed project would finance four or five additional sub-projects selected from a preliminary list of 20 potential sub-projects totaling approximately US$134.6 million which was prepared during project preparation and is presented in Appendix 1.

Feasibilities Studies and Detailed Engineering Design (estimated cost: US$2.2 million). In addition to the preparation of feasibility studies and detailed engineering designs for the seven sub-projects mentioned above, the proposed project would finance similar studies and engineering designs for about seven more sub-projects which would be implemented during the Phase II of the Program.

Estimated Cost. The total cost for this Component is estimated at US$73.7 million, including the implementation of seven sub-projects (about US$64.5 million), related land compensation and resettlement costs (about US$7 million) and preparation of feasibility studies and detailed engineering design for all Phase I and Phase II sub-projects (about US$2.2 million).

D. Selection Process for Candidate Sub-projects [Appendix 2]

Based on the experience gained from the selection process of Year 1 sub-projects and the review of their feasibility studies (Ba Tri, Vuc Mau and the Mekong Delta Flood Forecasting System), it is recommended that the selection of subsequent sub-projects should as follows:

- CPMO should prepare, for each candidate sub-projects for Year 2, a preliminary assessment against the agreed selection criteria presented in Appendix 2.
The final list of sub-projects to be implemented in Year 2 should be approved by MARD no later than December 31, 2005.

After preliminary review by the Bank, feasibility studies should be prepared in accordance with guidelines contained in the Project Implementation Manual;

The selection of Year 3, as well as Phase II, sub-projects in a particular province should then follow the preparation of a Strategic Investment and Action Plan based on a comprehensive risk assessment at the provincial or watershed management level. This would allow the selection of well planned sub-projects that would significantly reduce vulnerability to natural hazards.

More specifically, these sub-projects should: (a) be considered in the broader context of the river basin/coastal zone system; (b) integrate multi-sectoral issues of the concerned Ministries (MOT, MONRE, MOFI, MARD, etc); and (c) demonstrate from the beginning that they meet the selection criteria or, if not, a full explanation should be given (this may happen due to the multi-disciplinary nature of the NDFW project).

In terms of process, the provinces would hire local consultants to prepare the feasibility studies which would be reviewed at CPMO by national and international consultants. It is recommended that the provinces present an Interim Report (using the same structure as the Feasibility Studies but limited to the relevant sections and with a simplified level of details) to CPMO and the Bank within two months of their approval. This report would propose technical alternatives in line with NDRMP objectives and discuss their main environmental and social impacts. The screening of alternatives would be a key determinant for selecting sub-projects. It is expected that the feasibility study would then be completed within four months of the acceptance of the Interim Report by CPMO. CPMO would have to review the feasibility study with the Bank before final approval of the proposed sub-project.

E. Expected Outcomes and Benefits, Risk Assessment and Sustainability

The evaluation of expected outcomes and benefits, as well as a risk assessment and a sustainability analysis, would be undertaken for each of the sub-projects and included in the feasibility studies.

F. Monitoring and Evaluation

A baseline assessment and a description of key performance indicators would be included in the feasibility study for each sub-project.

COMPONENT 2: COMMUNITY-BASED DISASTER RISK MANAGEMENT

A. Introduction

This Component invokes community participation in solving disaster risk related problems with the ultimate goal of reducing vulnerability to natural hazards.
B. Rationale

Where rural communities continue to suffer severe impacts of flood, storm, drought and other natural hazards, their health and well-being are affected and their capacity to save, produce and invest is halted or reduced. The Government recognizes that the protection of lives and livelihoods ultimately rests with the ability of each individual and community to prepare for and reduce the risks associated with natural hazards.

C. Detailed Description

Under this Component, entirely funded by grant, the CBDRM approach would be used to build the capacity of the most vulnerable populations to carry out risk reduction measures. CBDRM would be combined with the other components to reduce the vulnerability of hazard-prone communes. Building on the lessons learnt from a stand-alone Pilot CBDRM Program, this component would support the scaling-up of CBDRM innovative approaches in 30 or more communes by preparing and starting to implement Safer Village Plans and Safer Commune Plans. The communes would be identified through consultation with key districts and provinces, both where structural sub-projects will be financed and where particularly vulnerable areas have been identified through risk assessment. A list of vulnerable communes has been established, based on agreed criteria such as disaster risk, overall linkages with other project components, and community commitment to reduce the risk of disaster (see list of agreed selection criteria in Appendix 2).

D. Estimated Cost

The Government of the Netherlands has agreed in principle to provide about US$1 million for supporting the scaling-up of CBDRM pilot activities. If successful, the Pilot Program could lead to the mobilization of additional funds to finance a further extension of these activities under Phase I or II of the Program.

E. Integration of Components 1 and 2

The coherence of the links between structural and non-structural sub-projects under Component 1 and activities under Component 2 is critical to the success of the project. In particular, each sub-project should be placed firmly in the context of its related communities, considering the severity of the expected hazards and the degree of vulnerability of the communities affected, as well as a clear demonstration of the sub-project’s ability to reduce disaster risk. In this regard, the “integration” criteria will have an increasing weight as the project develops.

F. Pilot CBDRM Program

Objectives. The purpose of this stand-alone program, to be funded by a Japan Social Development Fund (JSDF) Grant, is to develop and test innovative approaches to CBDRM in selected communes, which could be scaled-up by the Government into a broader program under the Natural Disaster Risk Management Program to include seventeen of the most vulnerable provinces in the country. More specifically, this component has three interrelated objectives:
to reduce vulnerability of persons and assets from recurring natural hazards in about ten vulnerable communes in the disaster-prone provinces of Ben Tre, Thua Thien Hue and Ha Tinh;

to develop and implement risk reduction strategies to local hazards and conditions; and

to integrate disaster risk management strategies into local development planning.

Detailed Description. The Pilot CBDRM Program would provide participating villages and communes with the capacity to plan and implement risk reduction measures applicable to the local conditions and provide the poor and vulnerable the opportunity to engage in a broad range of actions encompassing pre-, during- and post-disaster activities:

1. Community and local government capacity building

- Training and public awareness. This involves provision of training on the CBDRM concept and tools to communes, district and provincial officials. The CBDRM training is expected to produce safer counter-disaster plans.
- Orientating the wider public in the villages through public meetings, discussions and consultations.
- Participatory planning exercises to develop Safer Village Plans and then to integrate these plans into Safer Commune Plans for approximately ten pilot communes.

2. Community-driven disaster risk reduction and mitigation

- Based on the agreed Safer Commune Plans, a detailed plan for the implementation of risk reduction measures would be prepared.
- Examples of risk reduction measures include: (a) multi-purpose facilities that can serve as both as community training centers and evacuation centers during a disaster event; (b) provision of basic facilities, such as water storage and distribution systems that will help prevent health-related disasters; and (c) repair of existing roads that can provide evacuation and access to humanitarian relief prior to, during and after a disaster.
- An Operations Manual, including procurement, operation and maintenance arrangements, has been prepared to guide implementation.

3. Community-driven disaster risk preparedness

- Non-structural measures focus on changing attitudes, assumptions, perceptions and behaviors in relation to the threat of natural hazards from a predominantly “reactive” pattern based on “coping with the aftermath of disaster events” to a more “proactive” strategy of anticipating, planning and investing in order to reduce damage and risks to life and livelihoods in disaster-prone areas.
- Each selected commune under the project would be expected to include in its priorities non-structural projects such as: public awareness; training; procurement of basic equipment for life-saving and communications; communications/early warning systems designed to reach remote and isolated households; and evacuation drills and evacuation center management plans.
• Operation and maintenance of non-structural disaster risk mitigation measures would be complementary to the small-sized structural mitigation measures.

4. Partnership strengthening between poor communities and local government

- **Strengthening district and commune disaster risk management system.** This component would finance activities to support the local districts and communes in developing the capacity to carry out CBDRM and establishing a monitoring and evaluation system to measure the effectiveness and impact of disaster mitigation activities.

- **Scaling up strategy.** The information collected would be used to develop a strategy to scale-up the methodology in other provinces in Vietnam.

**Estimated costs.** The total funding available for this Component is US$1,460,000 allocated as follows: US$240,000 for community and local government capacity building; US$740,000 for community driven disaster risk reduction and mitigation sub-grants; US$380,000 for community driven risk preparedness sub-grants; and US$100,000 for partnership strengthening between poor communities and local government.

**Selection of Pilot Communes.** During project preparation, 84 communes were selected based on agreed criteria (see Appendix 2). The ten pilot communes presented in Appendix 3 have been selected from that list. Assessing commune vulnerability to natural hazards, and ranking and prioritizing them according to a range of needs are key skills that this component would bring to provincial and district level Flood and Storm Control Committees and Government departments. Thus, it is important to view commune selection and validation as part of the activities under the project.

**Monitoring and Evaluation.** The monitoring of this component comprises process monitoring though visits and visual inspection. The results would be documented and recorded to facilitate management and supervision and to generate progress reports. This would involve continuous recording of all stages of the sub-project cycle for each participating commune and district (e.g., planning, decision-making, sub-project approval, implementation, completion and disbursement). The project would design a monitoring system to capture the progress in implementation of community activities. The process monitoring would be conducted by an independent person/agency outside the project management and adopt a field-oriented approach. The same person/agency would evaluate the impact of the project at the time of mid-term review and after project implementation.

**COMPONENT 3: POST-DISASTER RECONSTRUCTION SUPPORT**

A. **Introduction**

This component has been designed to partially address a recurrent financing gap in public resources available to fund reconstruction costs associated with natural disasters, including

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12 The total approved amount is US$1.5 million, including US$40,000 which has been set aside for Bank incremental cost for supervision of the project implementation.

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lower-level localized disasters. It aims to provide a rapid disbursement facility to fund post-
disaster reconstruction of eligible public infrastructure, supporting fast recovery and reducing the
diversion of limited public investment resources from new development investments into
reconstruction. The funds under this component would be expected to be fully disbursed over a
3-4 year period.

B. Rationale

According to Article 9(1) of the Government’s 2002 Law on State Budget, 2-5 percent of the
central budget and of local budgets at various levels should be allocated to a contingency budget
“to meet contingent spending on preventing, combating, and overcoming consequences of the
acts of God and fires, important tasks of national defense and security”. In practice, Contingency
Budgets have been set near the minimum statutory requirement of 2 percent in recent years,
reflecting heavy demands on public resources, and have been inadequate in meeting costs of
disasters even in years of lower losses. The overall annual funding gap for all disaster relief and
reconstruction requirements ranged between an estimated US$46 million and US$130 million
over the period 2000 to 2003. Priority in the allocation of available resources is awarded to
humanitarian relief, related social welfare support, and temporary repairs while, because of
funding shortfalls, reconstruction activities can take up to four or five years to complete. Delays
in reconstruction can have significant impacts on the local economy and livelihoods in the
affected community, as well as on the provision of education, health care and other services.
The Contingency Budgets have also been used for extreme events such as the control of the 2004
and 2005 Highly Pathogenic Avian Influenza (HPAI) epidemics.

C. Objectives

Component 3 has two objectives:

- To help address the recurrent financing gap, ensuring more rapid post-disaster
  reconstruction and limiting poverty-exacerbating and economic growth-dampening
  impacts of disasters; and

- To strengthen government speed and efficiency in the allocation and disbursement of
  post-disaster resources and enhance effectiveness of use.

It could also lever additional funds from other donors in response to disasters and improve
coordination, harmonization and overall efficiency in the use of combined Government and aid
resources by encouraging channeling of all post-disaster assistance through government
channels.

D. Detailed description

Component 3 will entail the provision of funding for post-disaster reconstruction of eligible
public infrastructure, helping to address a recurrent annual financing gap in the availability of
funds. The component will operate to the extent possible in accordance with existing
government procedures for allocation and disbursement of its State Contingency Budget. The
Government will determine allocations and use of Bank funding based on information contained
in post-disaster damage assessment reports and related requests for assistance and on eligibility
criteria as specified in the Operations Manual. Specifically, Component 3 would finance the following activities: (a) public infrastructure reconstruction; and (b) institutional strengthening.

(a) **Reconstruction activities.** The component would finance post-disaster reconstruction of public infrastructure, including schools, health facilities, roads, bridges, water and sewerage infrastructure, pumping stations, canals and dykes, at any level of government and across the country. Reconstruction activities would: (i) incorporate appropriate hazard-proofing features but no other major upgrades or enlargements; (ii) comply with Bank safeguard requirements; and (iii) be completed within a period of 12 months (including procurement) from the date of release of funds to the relevant provinces or line ministries.

(b) **Related institutional strengthening.** The component would focus on strengthening the speed and efficiency of the Government’s post-disaster reconstruction activities by improving the damage assessment process and strengthening the management and effectiveness in use of disaster relief and reconstruction resources and related reporting processes, both in central and provincial government. More specifically the proposed project would finance the following activities:

- **Key studies** including: (i) current practices in the damage assessment process; (ii) current practices in the management of disaster relief resources; and (iii) budgetary consequences of disasters; and

- **Consultant services** including: (i) the recruitment of a national damage assessment specialist to be located in the DMC; (ii) the selection of a consulting firm to conduct annual independent monitoring inspections; and (iii) the recruitment of individual consultants to develop detailed procedures for the implementation of Component 3.

**Estimated costs.** US$20 million has been allocated to this Component, to which US$0.8 million will be added for related institutional strengthening activities to be funded by a PHRD grant. Additional IDA funding could be channeled through the same institutional arrangements and procedures in the event of a major disaster, strengthening the speed and effectiveness of the Government’s response to major events.

E. **Risk assessment and sustainability**

**Risk assessment:**

**Fiduciary risk.** Existing reporting and accounting procedures pertaining to the use of the Government Contingency Budget are weak. There is an implied medium risk that Bank financial reporting requirements would not be satisfied. There is an additional medium fiduciary risk relating to the potential for misuse of allocated funds at lower levels of government.

Several mitigation measures and related monitorable indicators have been built into Component 3 to reduce fiduciary risk:

- Release of funds from IDA would be dependent on compliance with quarterly financial reporting and annual, external audit requirements. Implementing agencies, PPMUs and the MOF would all have to satisfy stipulated financial reporting requirements;
• When funds are released from the Special Account, transfer instructions would clearly specify how any IDA funds must be used; and

• An independent monitoring institution would undertake an annual technical evaluation of reconstruction funded by IDA under Component 3.

**Implementation risks.** There is a medium risk that current procedures for damage assessment and the allocation of public resources for post-disaster response would be inadequate to identify and prioritize reconstruction needs.

To reduce implementation risk, the Bank would not release funds for Component 3 until diagnostic studies of current Government procedures had been completed and recommended improvements included in an Operations Manual acceptable to the Bank. In addition, these studies would be followed by a series of institutional strengthening activities.

**Sustainability:** The critical factors to project sustainability are:

• Application by the Government of procedures and processes established for Component 3 for the assessment of damage and the identification and prioritization of post-disaster needs for all available public assistance; and

• Appropriate hazard-proofing of reconstructed infrastructure.

**F. Monitoring and Evaluation**

As Component 3 represents a new approach in post-disaster reconstruction in Vietnam, monitoring and evaluation would be critical both as a management information tool providing feedback for refining implementation procedures and as a longer-term learning process in prioritizing and managing post-disaster reconstruction efforts.

The timing and purpose of use of disbursements under Component 3 would be demand-driven, dependent on the timing and nature of impact of disasters in Vietnam. As such, yearly disbursement targets cannot be determined and no quantitative targets have been set.

However, rigorous quarterly physical and financial progress reporting requirements have been set, to be supplemented by annual technical inspections of funded activities. Compliance monitoring would also be undertaken. The end of project impact evaluation would focus on evidence of a narrowed financing gap for post-disaster reconstruction; improvements in post-disaster damage assessments; enhanced effectiveness of use of Government disaster resources; and strengthened physical resilience to future hazard events, as reflected in appropriate hazard proofing of reconstruction works.
COMPONENT 4: INSTITUTIONAL STRENGTHENING AND CAPACITY BUILDING

A. Introduction

The design of this Component is based on an institutional analysis and assessment of natural disaster risk management carried out during project preparation. Results from this study show that:

- Almost all efforts to mitigate and manage natural disaster impacts are cross-sectoral, i.e., to be effective, most actions should result from the coordination of combined efforts from many ministries, government agencies, public and private agencies, and local communities, including NGOs and possibly all-new forms of partnership motivated by cooperation and shared responsibilities;

- Integration of risk factors, human vulnerability (social, physical, economic, environmental) and natural hazards (geological, hydro-meteorological, biological, technological), in long term planning is imperative in order to ensure sustainable social and economic development;

- The draft Second National Strategy and Action Plan (2001-2020) covers thoroughly the most important issues in disaster mitigation and management and already outlines the orientations, strategies and master plans for the regions, but it still needs a legal framework to be institutionalized and become applicable. Moreover, because of the fastchanging technologies and knowledge in disaster mitigation and management, it needs to be updated in order to integrate new realities in its action plan, in particular the notion of risk management including human vulnerability and the river-basin approach;

- Vietnam has always given priority to law and policies related to disaster mitigation and management, and keeps improving and completing legislation in this domain. It has already enacted a number of laws and put in place an effective structure for mitigation of disasters, the Central Committee for Flood and Storm Control (CCFSC) and its local CFSCs. Nevertheless, there are still important gaps between the enforcement requirements and the actual application of these laws and regulations. There are also delays in the revision of certain Resolutions following the enactment of related Laws and Ordinances; and

- Although the CCFSC reorganization is still pending, particularly after the introduction of the new Ordinance on Prevention and Control of Floods and Storms (PCFS) in 2000, the CFSCs’ mandate is already very large and covers the three-phase process: Prevention-Response-Recovery. In reality, the CFSCs’ actions have been mostly focussed on Response. These organizations need empowerment for the committee chairmen because of their cross-sectoral character, and capacity strengthening, in terms of human and material resources, in order to improve their performance. Coordination of disaster mitigation between different sectors needs to be further strengthened, and the capacity of disaster mitigation staff at local levels needs to be improved. Policies for disaster mitigation also need to be updated to keep pace with rapid socio-economic changes and to develop disaster management capacity. Moreover, mitigation and prevention actions cannot rely only on government actions; they also need the active participation of the general public, diverse communities and private organizations.
B. Objectives

The objectives of the component are:

- to develop a functional and efficient project management and implementation organization, taking into account the conditions of local cross-sectoral context; and
- to strengthen government institutions to ensure better coordination and integration among the various agencies and different levels of responsibility for prevention, response and recovery.

In particular, institutional strengthening and capacity building at the Central Government level would focus initially on strengthening the DMC, which acts as the Standing Office of the CCFSC, located in MARD, and the General Department of Hydro-Meteorological Services (GDHMS) located in MONRE. At the provincial Government level, the focus would be on the Provincial Flood and Storm Control Committees, with an emphasis on inter-Provincial cooperation mechanisms and on multi-sectoral planning involving all Ministries.

C. Detailed Description

Under this component, the proposed project would support three sub-components: (a) project management; (b) institutional strengthening and training; and (c) risk management capability enhancement.

**Project management**

Activities to be financed under this sub-component include: (a) incremental staff at central and provincial levels, and related incremental investments and operating costs; (b) the provision of equipment and vehicles; (c) the provision of consultant services, equipment and training activities to support financial and environmental management, as well as project monitoring and evaluation functions, including the independent monitoring of Resettlement Action Plans; and (d) the provision of technical assistance, composed of national and international specialists, to strengthen project management and enhance the technical design of sub-projects under Component 1.

Consultant Services under (c), composed of national and international specialists, would be financed under the IDA Credit to assist CPMO, PCUs and PPMUs teams in the management and implementation of the project. The following specialists are likely to be needed by CPMO and PPMUs in the course of project implementation:

- **Procurement and Financial Management Specialists**, in number and qualification in compliance with the recommendations of the Capacity Assessments carried out during preparation;
- **Independent Auditors**, to carry out annual audits of project accounts;
- **Monitoring and Evaluation Specialists**, to establish a system to monitor and evaluate project implementation and the achievement of the objectives. Activities to be financed
under the project include collection of baseline data at all levels, and the interim and final evaluations of sub-projects; and

- **Specialized disciplines.** Activities which are related to socio-economic, financial, legal, institutional, demographic, and environmental aspects (mainly for Components 2, 3 and 4) of the project may need specialized expertise from within Vietnam or from abroad. The experts include CBDRM Specialists, Financial/Economical Analysts, Environment Impact Assessment Specialists, and Social Safeguards Specialists (Resettlement, Ethnic Minorities, etc.).

Technical assistance (TA) under (d)\(^1\) composed of national and international specialists would be mobilized to strengthen project management and enhance the technical design of sub-projects under Component 1. Long and short-term TA would include both advising and training functions. Training of trainers would be applied where possible, and transfer of knowledge and skills would be expected to be a priority concern for all technical assistants. The following TA would be needed during project implementation:

- **Project Management Specialist:** 24 person-months. This TA should be the first to be hired by CPMO. The specialist will act as counterpart to the CPMO Director. The assignment is not necessarily continuous and can be spread over a period of four years. It is recommended that this TA would be hired at the earliest opportunity in order to help CPMO speed up the activities in the Preparation Phase;

- **Engineers** in specialized technical disciplines (such as dam safety, risk assessment, hydrodynamics, erosion, monitoring instrumentation, preventive maintenance, structural safety, and sedimentation) may be needed to review around 20 feasibility studies prepared by local consultants, mainly under Component 1; and

- **Specialized disciplines.** These experts will provide assistance to CFSCC, DMC, provincial FSCs, Hydro-Meteorological Centers and Services and other institutions or agencies (existing or new) involved in project implementation that may require capacity strengthening or assistance in the execution of their mandate. The experts identified to date are: a weather forecast specialist, a disaster risk specialist, and an information technology specialist.

**Institutional strengthening and training**

Activities to be financed under this sub-component through a PHRD Capacity Building Grant from the Government of Japan, include: (a) an Institutional Strengthening Development Plan through the provision of technical assistance to mainstream natural disaster risk management into development planning and support the update and implementation of the Second National Disaster Mitigation and Management Strategy; and (b) a Comprehensive Training Program focusing on the FSCCs at the local level (including Communes, Districts, and Provinces) and central levels, but also supporting the central institutions such as the DMC in MARD, technical departments in MOF involved in the management of emergency relief and reconstruction resources, and Hydro-meteorological departments in MONRE.

\(^1\) The Government of the Netherlands is expected to finance this expertise through bilateral grants.
Institutional strengthening development plan. The proposed sub-component would support the following activities:

- Integrating NDRM into development planning, through the mobilization of technical assistance to assist project provinces in preparing Natural Disaster Mitigation Investment Plans. Structural investments under Component 1 would be selected based on detailed risk assessments and would be complemented by both structural and non-structural investments under Component 2, following the principles of integrated risk management and river-basin approaches;

- Updating the Second National Strategy and Action Plan for Disaster Mitigation through the implementation of key studies, including studies on financial risk sharing and risk transfer, management of disaster relief, and Vietnam’s long-term vulnerability to natural hazards, and workshops and study tours;

- Up-dating legal regulations and ordinances relating to natural disaster risk management; and

- Carrying out a study on emergency management mechanisms to assess the need and the possibility of establishing a center for emergency management to assist Vietnam to cope with large-scale disasters. The needs assessment would focus on ways to strengthen the Government’s readiness to deal with a massive natural disaster. Vietnam has demonstrated a good capacity in the past to deal with medium-scale disaster. However, it has not been tested under large scale disaster conditions (such as the one which is facing the recently tsunami-affected countries in the Bay of Bengal). The project could provide support to Government to prepare it for such an event, including the establishment of a well-equipped emergency management center, the implementation of an emergency response system and communication system, establishment of well-equipped and mobile search and rescue teams in various part of the country, and procurement of materials and equipment required in the event of disaster (such as water purification tablets, tents, etc.).

Training program. A preliminary training program has been developed during project preparation, but would need to be refined in the early stages of project implementation. Activities under the program highlight the key training topics and provide guidelines for designing and developing the curricula and instructional materials as training needs become clearer. Local and foreign technical assistants may be needed to assist the responsible department (DMC is the proposed leading department) in this task. Activities described below for each program will follow the same pattern, including: (a) training needs’ assessment; (b) identification, selection and training of trainers; (c) curriculum development and testing (optional); (d) seminar/workshop delivery; and (e) monitoring and evaluation.

The following areas for training have been identified:

- **Performance enhancement**, to increase knowledge for policy and decision-makers, as well as central and local government leaders, on vulnerability reduction and natural disaster risk management;

- **Project management and communication**, to enhance management skills of project staff;
• **Disaster understanding and awareness**, to ensure the participation and commitment of the general public, communities and NGOs in the Government’s efforts to mitigate disaster risk. These activities include “passive” campaigns advertised in the mass media and publication of pamphlets, posters and booklets to be distributed to the public; and

• **Disaster risk management networking**, to promote partnerships and ensure public and private commitment to disaster risk management.

A training specialist would be hired at the beginning of project implementation to develop capacity building and training programs for local and central levels.

**Risk management capability enhancement**

Activities to be financed under this sub-component include the provision of technical assistance to strengthen a comprehensive and holistic approach to risk management by supporting five risk management areas.14

**Risk management areas.** The following risk management areas have been used to “map” the proposed activities to be supported by the project: (a) risk context established; (b) risk identified; (c) risk analyzed; (d) risk evaluated; and (e) risk treated:

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14 The Government of the Netherlands is expected to finance this expertise through bilateral grants.
While all sub-projects under Component 1 fall into the fifth area “Risk Treated” (structural sub-projects) and third area “Risk Analyzed” (non-structural project), a number of activities under Component 4 would assist the Government in developing risk management instruments and methodologies in order to move towards a truly integrated disaster-risk management approach. In particular, the proposed activities would support:

- The development of guidelines that describe the fundamental processes making up the risk management concept and key principles for the detailed implementation of a risk management approach within Vietnam. In addition, the proposed project would support the preparation of contingency plans in sensitive areas, such as water supply and waste-water treatment;

- The expansion and development of a national geographic information systems (GIS) database to address the need for population and asset assessments (houses, buildings, and
infrastructure) which must be carried out in order to get to the stage of quantifying potential projected losses or measuring actual losses during post-disaster assessment programs. This information can also be used to provide a sense of whether a particular project promoting mitigation of disaster as its outcome can, in fact, claim success; and

- The development of numerical modeling (e.g., river flows, storm wave and surge, cyclone and storm wind models) which play an essential role in testing the viability of structural interventions. These provide a cheap and non-destructive means of testing the efficacy of hydraulic structures, in particular during design or defining the severity and extent of flood and storm-related hazards. Models rely critically on the need for accurate input data, particularly digital elevation and bathymetry (water depth) models – DEMs in general - usually accessed through a GIS database which is used to store and manipulate information.

**Activities supported by the project.** The Component would support the following activities, which would be financed by bilateral grants from the Government of the Netherlands:

- Support to risk identification in major centers, including the establishment of Geodetic reference systems, acquisition of satellite imagery, LIDAR data and aerial photography, and related training;
- Support to risk analysis, including upgrading existing national facilities for GIS and numerical modeling, and the development of risk mapping and risk-loss models;
- Support to risk assessment, including production of orthophoto maps and DEMs and technical assistance for cyclonic wind modeling, tidal modeling, storm wave and surge modeling, storm tsunami modeling, catchment area and river flood modeling, and coastal impact modeling;
- Support to risk treatment, including equipment upgrading and training for ocean search and rescue modeling capability, oil spill environmental modeling capability, and technical assistance to development contingency planning for water supply and wastewater treatment.

**Estimated costs**

The total estimated cost for Component 4 is US$12 million, of which about US$5.5 million is for project management, US$3.7 million for institutional strengthening and capacity building, and US$2.8 million for risk management capability enhancement.

The sources of funds are as follows: Government counterpart funds US$1.6 million, mainly for incremental staff at central (CPMO and PCUs) and provincial level (PPMUs), IDA credit US$2.5 million, and PHRD Capacity Building Grant US$3.7 million. There is still a financing gap of approximately US$4.20. However, the Royal Netherlands Embassy has committed resources, to be confirmed, starting in 2006 to support project management activities through US$1.4 million of technical assistance and US$2.8 million for risk management capability enhancement.
D. Expected outcomes and benefits, risk assessment and sustainability

Outcomes and benefits
Component 4 is expected to have seven key outcomes and benefits:

- A structured and competent NDRM Project Management organization, including a CPMO and PPMUs.
- Competent staff for CCFSC and FSCs, DMC, GDHMS (MoNRE) and their demonstrated leadership and capabilities in the collection, compilation and assessment of natural disaster information, and in the dissemination of relevant information to the general public and communities.
- The Institutional and Training Plans implemented as planned, within the allotted budget and time frame.
- Technical Assistance requirements implemented effectively and in a timely manner.
- Better understanding and awareness of disasters and their impacts among the general public and communities.
- Stronger links and better coordination and integration among the various governmental and non-governmental agencies, at different levels, responsible for disaster prevention, response and recovery.
- Enhanced risk management capability.

Risk assessment

The following are critical assumptions without which this component’s implementation would undergo certain risks:

- Long-term commitment to structural adjustment from all levels;
- Policies, legislation and procedures in support of organizational development aimed at reducing disaster risk are approved and implemented; and
- Authorities are able to implement the recommended changes and improvements within the project duration.

Resistance to change is a major critical risk in the implementation of Component 4. Training alone cannot change the trainee’s working habit or way of thinking. These activities have to be followed up by complementary actions, such as a new working environment, new equipment, a challenging new assignment, etc. In addition, multi-disciplinary project management requires special skills and qualifications that are not common within MARD. Therefore, the choice of the project management team would be critical.

Sustainability

By adopting the systems approach to institutional analysis (What, How and Where: Activities-Organizations-Strategy and Legal system), all aspects related to disaster management are
considered on an equal footing. The resulting well-balanced assessment would increase the sustainability of the solution. In addition, measures such as the Public Awareness Program would reach all categories and all levels of society, thus ensuring the sustainability of other components of the project, most particularly the CBDRM programs.

E. Monitoring and Evaluation

The monitoring and evaluation activities under the project include two sets of activities financed under Component 4: (a) project monitoring and evaluation under the responsibility of the CPMO, which will receive support from the DMC; and (b) institutional strengthening activities to enhance risk management capability. Key performance indicators for these activities include that: (a) the DMC, as the standing office of the CCFSC, has been strengthened; and (b) at least ten provinces have prepared Natural Disaster Mitigation Investment Plans.
## Table 6: Component 1 – Potential Sub-projects Year 2

<table>
<thead>
<tr>
<th>Phase</th>
<th>Year</th>
<th>Sub-Project Names</th>
<th>Province</th>
<th>Cost (USD$M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1</td>
<td>Year 2</td>
<td>Central provinces flood forecasting system (FS)</td>
<td>9 Central</td>
<td>10.0</td>
</tr>
<tr>
<td>Phase 1</td>
<td>Year 2</td>
<td>National natural disaster forecasting system</td>
<td>Whole Country</td>
<td>16.0</td>
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<tr>
<td></td>
<td></td>
<td><strong>Total Non-Structural</strong></td>
<td></td>
<td><strong>26.0</strong></td>
</tr>
<tr>
<td>Phase 1</td>
<td>Year 2</td>
<td>Hong Ngu Outer Dyke &amp; Bank Protection (FS)</td>
<td>Dong Thap</td>
<td>10.0</td>
</tr>
<tr>
<td>Phase 1</td>
<td>Year 2</td>
<td>Sea Harbours for Boat Safety</td>
<td>MoFi</td>
<td>10.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total Structural</strong></td>
<td></td>
<td><strong>20.0</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total Sub-Projects with FS</strong></td>
<td></td>
<td><strong>46.0</strong></td>
</tr>
</tbody>
</table>

## Table 7: Component 1 – Potential Sub-projects post-Year 2

### A. Sub-Projects with available Feasibility Study

<table>
<thead>
<tr>
<th>Phase</th>
<th>Year</th>
<th>Sub-Project Names</th>
<th>Province</th>
<th>Cost (USD$M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1</td>
<td>Years 3-4</td>
<td>An Du Estuary Stabilization</td>
<td>Binh Dinh</td>
<td>8.5</td>
</tr>
<tr>
<td>Phase 1</td>
<td>Years 3-4</td>
<td>Sea Outer Bank Sea Shore Protection (FS)</td>
<td>Phu Yen</td>
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<tr>
<td>Phase 1</td>
<td>Years 3-4</td>
<td>Cau Khai Drainage System (FS)</td>
<td>Thanh Hoa</td>
<td>3.5</td>
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<tr>
<td>Phase 1</td>
<td>Years 3-4</td>
<td>Tan Hung Canal (FS)</td>
<td>Long An</td>
<td>1.5</td>
</tr>
<tr>
<td>Phase 1</td>
<td>Years 3-4</td>
<td>National Provincial Road Flood Protection Mekong Delta (FS)</td>
<td>MoT</td>
<td>8.0</td>
</tr>
<tr>
<td>Phase 1</td>
<td>Years 3-4</td>
<td>Ve River Weir (FS)</td>
<td>Quang Ngai</td>
<td>6.0</td>
</tr>
<tr>
<td>Phase 2</td>
<td>Years 5-7</td>
<td>Hai Lang Drainage System (FS) - NDM Partnership</td>
<td>Thua Thien Hue</td>
<td>3.8</td>
</tr>
<tr>
<td>Phase 2</td>
<td>Years 5-7</td>
<td>O Lau Dyke Upgrade (FS) - NDM Partnership</td>
<td>Binh Thuan</td>
<td>6.8</td>
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<td>Phase 2</td>
<td>Years 5-7</td>
<td>Vo Xu Dyke and Pumping Station (FS)</td>
<td>Ninh Thuan</td>
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<td>Phase 2</td>
<td>Years 5-7</td>
<td>Dinh River Southern Flood Protection (FS)</td>
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<td><strong>Total Structural Sub-Projects with FS</strong></td>
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<td><strong>55.1</strong></td>
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### B. Sub-Projects without Feasibility Study

<table>
<thead>
<tr>
<th>Phase</th>
<th>Year</th>
<th>Sub-Project Names</th>
<th>Province</th>
<th>Cost (USD$M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 2</td>
<td>Years 3-4</td>
<td>Railway Drainage System</td>
<td>MoT</td>
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<tr>
<td>Phase 2</td>
<td>Years 3-4</td>
<td>Thu Bon River Bank Revetment</td>
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<tr>
<td>Phase 2</td>
<td>Years 3-4</td>
<td>Sea Shore Protection</td>
<td>Ha Tinh</td>
<td>5.0</td>
</tr>
<tr>
<td>Phase 2</td>
<td>Years 3-4</td>
<td>Quang Binh Sea Shore Protection</td>
<td>Quang Binh</td>
<td>2.5</td>
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<tr>
<td>Phase 2</td>
<td>Years 5-7</td>
<td>Thuan An Estuary Stabilization</td>
<td>Thua Thien Hue</td>
<td>8.0</td>
</tr>
<tr>
<td>Phase 2</td>
<td>Years 5-7</td>
<td>Dinh River System</td>
<td>Khanh Hoa</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total Structural Sub-Projects without FS</strong></td>
<td></td>
<td><strong>33.5</strong></td>
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<td></td>
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<td><strong>Total A+B</strong></td>
<td></td>
<td><strong>88.6</strong></td>
</tr>
</tbody>
</table>
Appendix 2

Proposed Criteria for the Selection of Component 1

**NON-STRUCTURAL INVESTMENT FOR PREPAREDNESS**
**(RISK ANALYSIS, RISK EVALUATION AND RISK TREATMENT)**

**Objectives:** Non-structural investments under Component 1 of the project aim at strengthening natural disaster preparedness through improving risk analysis, risk evaluation and risk treatment.

**Area:** The sub-projects would address a key disaster risk related dependence of a Commune or group of Communes nominated in one of the 17 Provinces selected by the Steering Committee meeting of 3rd June, 2003, where the requirement for mitigation measures has been demonstrated at the Commune level and subsequently through a consultation process at all levels of government.

Alternatively, the sub-project should address an identified National or Regional priority for disaster-risk reduction, such as the need to upgrade weather and climate monitoring services for the SRHMC, allowing inclusion of other provinces in the scope of the project.

**Criteria:** The selection of Non-Structural Sub-projects will be determined according to the following criteria:

1. It can be demonstrated that disaster mitigation or disaster risk treatment is the primary motivation for undertaking a sub-project, even though valid subsidiary motivations may also exist;
2. The selected sub-project design demonstrates a clear capability to treat and reduce identified risks from natural hazards while including provisions for an efficient and comprehensive multi-sectoral approach aimed principally at preventing and/or mitigating disaster impacts on life, property, economic assets, infrastructure, livelihoods, sustainable development and the environment;
3. The sub-project should be conducted in line with the Second National Strategy and Action Plan for Disaster Mitigation and Management in Vietnam 2001-2020, the Hunger Eradication and Poverty Reduction program, and the economic planning of the selected Commune(s) and district(s);
4. The sub-project should have on average a total estimated cost of less than US$10 million and be backed with at least a preliminary feasibility or pre-feasibility study including costs, planning, environmental and social assessments and containing appropriate measures for mitigation and compensation of adverse environmental and social impacts;
5. The sub-project should not already planned under another Government, NGO, or donor program, and should complement, rather than conflict with, existing, on-going or other planned projects; and
6. The sub-project should promote better coordination and cooperation between all levels of government in the treatment of disaster risk.

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Proposed Criteria for the Selection of Component 1

**STRUCTURAL INVESTMENT FOR PREPAREDNESS AND RESPONSE (RISK TREATMENT)**

**Objectives:** Structural investments under Component 1 aim at strengthening natural disaster preparedness and response through risk treatment.

**Area:** The sub-projects would address a key disaster risk related dependence of a commune or group of communes nominated in one of the 17 Provinces selected by the Steering Committee meeting of 3rd June, 2003, where the requirement for mitigation measures has been demonstrated at the commune level and subsequently through a consultation process at all levels of Government.

**Criteria:** The selection of structural sub-projects will be determined according to the following criteria:

1. It can be demonstrated that disaster mitigation or disaster risk-treatment is the primary motivation for undertaking a sub-project, even though valid subsidiary motivations may also exist;

2. The selected sub-project design should demonstrate a clear capability to treat and reduce identified risks from natural hazards, while including provisions for an efficient and comprehensive multi-sectoral approach, aimed principally at preventing and/or mitigating disaster impacts on life, property, economic assets, infrastructure, livelihoods, sustainable development, and environment;

3. The sub-project should be conducted in line with the Second National Strategy and Action Plan for Disaster Mitigation and Management in Vietnam 2001-2020, the Hunger Eradication and Poverty Reduction program, and the economic planning of the selected Commune(s) and district(s);

4. The sub-project should have on average a total estimated cost of less than US$10 million, and be backed with at least a preliminary or pre-feasibility study including costs, planning, economic cost-benefit analysis, environmental and social assessments and containing appropriate measures for mitigation and compensation of adverse environmental and social impacts (including considerations of poverty, gender, health, education, and land use);

5. The sub-project should not already planned under another Government, NGO, or donor program, and should complement, rather than conflict with, existing, on-going or other planned projects; and

6. The sub-project should promote better coordination and cooperation between all levels of government in the treatment of disaster risks.
Proposed Criteria for the Selection of Component 2

COMMUNES

The initial selection of Provinces (17) has been completed. The next priority will be the selection of Communes, which will be made in accordance with the following six criteria:

1. Location of the Commune in one of the Provinces selected for the project and, specifically, one of the 17 Provinces selected by the Steering Committee meeting of 3rd June, 2003;

2. The Commune should face a demonstrated relatively high level of potential hazard and/or have a recorded history of high susceptibility to disasters, even within the selected Provinces;

3. The Commune should be highly vulnerable to natural hazards, as a prime indicator. In addition, the level of poverty and adverse socio-economic impacts of disaster should be considered as secondary indicators;

4. Disaster mitigation measures should have the greatest impact.

5. The Commune should have a clear relationship to either a Structural or Non-Structural Sub-Project selected for the project through a geographical and/or causative linkage, and/or it should form part of a logical grouping of Communes in the same situation, perhaps on a whole-of-catchment area basis if appropriate; and

6. Final selection will be dependent on a participatory process of consultation to verify that the Commune has a demonstrated commitment to the aims and activities of the project.
Appendix 3

Pilot Community-based Natural Disaster Risk Management Program
(Stand-alone JSDF Grant)

**PROJECT AREA**

<table>
<thead>
<tr>
<th>Provinces</th>
<th>District</th>
<th>Communes</th>
<th>No of Villages/commune</th>
<th>Population per Commune Male/Female</th>
<th>Area Ha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ben Tre</td>
<td>Ba Tri</td>
<td>An Hiep</td>
<td>9 villages</td>
<td>12,201/5,890M/6,311F</td>
<td>2,516 ha</td>
</tr>
<tr>
<td></td>
<td></td>
<td>An Hoa Tay</td>
<td>5 villages</td>
<td>10,682/2046HH</td>
<td>1,752.1 ha</td>
</tr>
<tr>
<td></td>
<td></td>
<td>An Duc</td>
<td>9 villages</td>
<td>7,524/3655M/3869F</td>
<td>1,232.6 ha</td>
</tr>
<tr>
<td>Thua Thien</td>
<td>Phong Dien</td>
<td>Phong Chuong</td>
<td>9 villages</td>
<td>7758/3492M/4266F</td>
<td>3,577 ha</td>
</tr>
<tr>
<td>Hue</td>
<td></td>
<td>Phong Binh</td>
<td>13 villages</td>
<td>7481/3367M/4114F</td>
<td>1,728 ha</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Quang Dien</td>
<td>8 villages</td>
<td>7681/11715HH/3720 M, 3961 F</td>
<td>1,260.47 ha</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Quang Loi</td>
<td>9 villages</td>
<td>7585/1628HH/3801M/3782F</td>
<td>3,324 ha</td>
</tr>
<tr>
<td>Ha Tinh</td>
<td>Duc Tho</td>
<td>Duc La</td>
<td>4 villages</td>
<td>1,736/378 HH</td>
<td>334.26 ha</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Duc Chau</td>
<td>5 villages</td>
<td>2,700/650 HH</td>
<td>465 ha</td>
</tr>
<tr>
<td>Huong Son</td>
<td>Son Thinh</td>
<td>16 village</td>
<td>3250/1490M/1760F</td>
<td>510 ha</td>
<td></td>
</tr>
</tbody>
</table>

**Total** 87 villages 68,598 16,699.43
Annex 5: Project Costs

VIETNAM: Natural Disaster Risk Management Project

<table>
<thead>
<tr>
<th>Project Cost By Component and/or Activity</th>
<th>Local (US$M)</th>
<th>Foreign (US$M)</th>
<th>Total (US$M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Prevention and mitigation investments</td>
<td>39,978</td>
<td>21,964</td>
<td>61,942</td>
</tr>
<tr>
<td>B. Community-based disaster risk management (scale-up)</td>
<td>380</td>
<td>420</td>
<td>800</td>
</tr>
<tr>
<td>C. Post-disaster reconstruction support</td>
<td>12,992</td>
<td>4,312</td>
<td>17,304</td>
</tr>
<tr>
<td>D. Project management and institutional strengthening</td>
<td>4,996</td>
<td>6,334</td>
<td>11,330</td>
</tr>
<tr>
<td>1. Project Management</td>
<td>2,493</td>
<td>2,631</td>
<td>5,124</td>
</tr>
<tr>
<td>2. Capacity Building and Training</td>
<td>1,743</td>
<td>1,857</td>
<td>3,600</td>
</tr>
<tr>
<td>3. Risk Management Capability Enhancement</td>
<td>760</td>
<td>1,846</td>
<td>2,606</td>
</tr>
<tr>
<td>Base Cost</td>
<td>58,346</td>
<td>33,030</td>
<td>91,376</td>
</tr>
<tr>
<td>- Physical Contingencies</td>
<td>5,197</td>
<td>1,884</td>
<td>7,081</td>
</tr>
<tr>
<td>- Price Contingencies</td>
<td>6,731</td>
<td>2,352</td>
<td>9,083</td>
</tr>
<tr>
<td>Total Project Cost</td>
<td>70,274</td>
<td>37,266</td>
<td>107,540</td>
</tr>
<tr>
<td>Pilot Community-based Disaster Risk Management Program</td>
<td>979</td>
<td>481</td>
<td>1,460</td>
</tr>
<tr>
<td>Total Financing Required</td>
<td>71,253</td>
<td>37,747</td>
<td>109,000</td>
</tr>
</tbody>
</table>

Financing Plan

- Government                                                                       | 10,613       | 1,427          | 12,040       |
- IDA Credit                                                                        | 56,279       | 29,721         | 86,000       |
- Co-Financing                                                                     |              |                |              |
  + PHRD Grant for Institutional Capacity Building                                   | 1,898        | 2,601          | 4,500        |
  + Government of the Netherlands                                                    | 1,483        | 3,517          | 5,000        |
- Japan JSDF (Stand-alone Pilot CBDRM Program)                                      | 979          | 481            | 1,460        |
Total                                                                             | 71,253       | 37,747         | 109,000      |

1 Identifiable taxes and duties are US$9.6 million and the total project cost, net of taxes, is US$99.4 million. The IDA credit’s share of the project cost net of taxes is 86.5 percent.
Annex 6: Implementation Arrangements

VIETNAM: Natural Disaster Risk Management Project

A. INSTITUTIONAL AND LEGAL FRAMEWORK

The Government of Vietnam attaches the highest importance to disaster risk management, particularly to water-related disaster risk management. A number of legal documents for disaster risk management have been enacted and a structure has been put in place under the CCFSC to strengthen institutional coordination, especially in the area of emergency response and long-term reconstruction and recovery.

Government Committees and Agencies in Disaster Risk Management

Institutional Coordination. The complex tasks of disaster mitigation and management involve the work of many agencies and individuals at different levels. State agencies and social and economic organizations are brought together for disaster risk management of water-related disasters through the CCFSC. The CCFSC was established in 1990 and consists of the Ministries and Government agencies, chaired by MARD. A specific committee for search and rescue has also been established to complement the CCFSC’s mission. Appendix 1 presents the institutional organization of natural disaster risk management in Vietnam.

Central Committee for Flood and Storm Control (CCFSC). The CCFSC and its parallel structures at Ministries, Province, District and Commune levels prepare for and respond to water-related disasters. Its legal mandate is to assist the Prime Minister to implement the following tasks:

- Supervise and inspect different line ministries in their implementation of annual plans for flood and storm prevention, control and recovery;
- Coordinate and supervise the implementation of floods and storms forecasts and early-warning systems;
- Mobilize the necessary resources for the preparation of investment proposals, information dissemination in disaster risk management; and
- Disseminate information and raise awareness of communities on knowledge and experiences of disaster management and relevant regulations;

Members of the Flood and Storm Committees. Institutions and agencies represented in the CCFSC include (see Figure 3):

- Ministry of Agriculture and Rural Development (MARD). Its officers at different levels are charged with annual checking of infrastructure for safety, reforestation, drawing-up of cropping calendars, and plant protection.
- Ministry of Finance (MOF). Responsible for budgeting and releasing Government Contingency Funds and other financial resources in order to meet post-disaster...
reconstruction relief needs. It also provides guidelines for compensation to individuals or communities whose assets have been lost during disasters. Auditing of all disaster-related disbursements and expenses also falls under the MOF's responsibility.

- **Ministry of Planning and Investments (MPI).** Responsible for planning disaster recovery and reconstruction of dykes and dams, and other infrastructure.

- **Ministry of Foreign Affairs (MOFA).** Together with CCFCS, MOFA is responsible for communicating disaster news to international communities and mobilizing all donor financing.

- **Ministry of Natural Resources and Environment (MONRE).** MONRE is in charge of forecasting weather patterns in the entire country. The central department in Hanoi is the top of a chain which disseminates information on predicted weather disturbances and extreme weather patterns to Party Offices, People's Committees, CFSCs, and media at all levels. CCFSC then decides on proper measures, and issues warnings which are disseminated through People's Committees and post offices to communes and villages, and to boats operating at sea.

- **Ministry of Health (MOH) and Ministry of Education (MOE).** MOH works to prevent outbreaks of disease during and after disasters. Health workers at commune clinics stock medicine prior to the flood season and monitor public health, while MOE has an important role to play in awareness-raising.

- **Ministry of Fisheries (MOFI).** MOFI and its related offices establish regulations and raise awareness among fishermen about safety at sea, and organize search and rescue operations at sea in the event of natural disasters.

- **Ministries of Defense (MOD) and Transport (MOT),** together with MARD and MOFI, have the additional duty, when notified of storms or floods, of erecting warning signals at harbors and dike monitoring stations, and on vessels operating at sea, and equipping lighthouses with facilities for transmitting storm-warning signals or tropical low pressure signals.

- **Ministry of Labor, Invalids and Social Affairs (MOLISA)** is responsible for attending to the special care of the poor and vulnerable groups, and in particular for assessing the impact of disasters on these groups and ensuring that appropriate relief is distributed.

- **Committee for Ethnic Minorities and Mountainous Areas (CEMMA)** holds responsibilities similar to those of MOLISA towards ethnic minorities in the uplands.

- **Ministry of Culture and Information (MOCI), Vietnam TV, and Vietnam Voice** are responsible for providing timely information on a specific disaster to the general public and various communities, and related disaster legislation, prevention and mitigation measures.

**Ministry/Agency Committees for Flood and Storm Control.** Each Ministry and Agency involved in post-disaster response is responsible for establishing a Flood and Storm Control Committee, and similar structures exist at the province, district and commune levels. The mandate of the Ministerial Committee is to assist the Minister to carry out the following tasks:
- Formulate and implement its line ministry plan of disaster prevention and control, protecting assets and people under its administration; and
- Timely provision of necessary materials and equipment administered by the ministry for use in the prevention and control of disasters according to decisions of the CCFSC.

**Figure 3. Central Committee for Flood and Storm Control**

CCFSC ORGANIZATION CHART

**National Committee for Search and Rescue (NCSR).** This committee is accountable to the Prime Minister, is chaired by the Vice-Minister of MOLISA and includes five vice-chairmen from those line Ministries with important roles in the activities of search and rescue. Similar organizations are replicated at the province, district and commune levels. The NCSR has the following tasks and responsibilities:

- To direct and undertake the search and rescue of people and assets affected by traffic accidents, natural disasters, catastrophes, floods, storms and oil spillages;
- To mobilize and coordinate resources from different line ministries, different localities and organizations, as well as individuals, to implement search and rescue activities;
- To co-operate with other countries in the region to implement search and rescue activities;
To provide guidelines and to supervise and inspect the line ministries in the implementation of legal documents that apply to search and rescue; and

To implement international activities with foreign and international organizations in related activities.

**Committee for Distribution of Goods and Money.** Created by the Prime Minister and chaired by the Deputy Minister of MOLISA, this Committee has two Vice-Chairmen, the Chief of Central Fatherland Office and Vice-Minister of Ministry of Finance, and the following functions:

- To distribute goods and money in an equitable manner to affected people in disaster areas, based on the severity of damage and the availability of resources;
- To guarantee the appropriate use of all donations from organizations and individuals from within or outside Vietnam; and
- To inform the public of its actions through official channels of information.

**Legislation on Disasters Mitigation and Management (DM&M)**

Vietnam has given special attention to natural disaster mitigation and management in its legislation. The legislative bodies of the country have enacted a number of laws, put in place an effective structure for disaster mitigation and continue to improve and complete legislation in this domain. There are still, however, important gaps between the enforcement requirements and the actual application of these laws and regulations. There are also delays, as shown below, in the revision of certain Resolutions following the enactment of related Laws and/or Ordinances.

**Laws and Regulations.** The tasks of disaster prevention, preparedness and mitigation are institutionalized in a number of legal documents. The *Ordinance on Prevention and Control of Floods and Storms* (2000), the *Law on Water Resources* (1998), and the *Regulation on Flood and Storm Warning* (1997) are the three main legal instruments relevant to water-related disasters. Under these legal documents, it is the responsibility of all state agencies, economic, political and social organizations, People’s armed forces units and individuals to participate in the prevention, control and mitigation of adverse affects of water-related disasters (including floods and storms, drought, salt intrusions, sea-water surges and overflow, hail and acid rain). The *Environment Protection Law* holds organizations and individuals responsible for preventing and combating environmental degradation, environmental pollution and environmental incidents, including natural calamities, forest fires and industrial or nuclear accidents.

**Organization.** *Resolution 168-HDBT*, dated May 19, 1990, defines the organization and responsibilities of the CCFSC and the local and Ministry/Agency CFSCs. It has not been revised since, despite the approval in 1993 of the *Ordinance on Prevention and Control of Floods and Storms (PCFS)*, which was again revised in 2000. Moreover, *Resolution 32/CP* (1996), which defines guidelines for the application of the first Ordinance PCFS (1993), has not been revised since the revision of the latter in 2000.

**Legislative Gaps.** In 2000, the Prime Minister decreed the additional responsibility of Search and Rescue to local and Ministry/Agency CFSCs while, at the central level, there are still two
separate entities, the CCFSC and the NCSR. This situation needs close coordination between CCFSC and NCSR in order to avoid contradictory or overlapping messages to their common subordinates. Also, Article 23 of Ordinance PCFS (1993) and Article 21 of the same Ordinance PCFS (2000), relating to the compensation of damages caused to private equipment by government officials during disaster response, have not been followed up with any guidelines for their application. This would hinder significantly the capacity of Government authorities to take actions when they are short of resources in some contingency situations.

**Disaster Risk Management at the Local Level**

While specific authority lies within the Government Council and the CCFSC located in MARD to manage and coordinate disaster activities, disaster risk management requires the specific input of other agencies and ministries at the local level. Efficient coordination, information sharing and decentralized responses are vital to the success of disaster risk management. The mandate of the PCFSC is very large and already covers the following three phases of disaster risk management: (a) prevention; (b) response; and (c) recovery. In practice, the PCFSCs’ actions have been mostly focusing on disaster response.

**The key role of People’s Committees (PCs) in Natural Disaster Management.** People’s Committees at all levels, including province, district and commune, are responsible for directing activities related to overcoming the consequences of disaster. When disasters occur, the vice-chairman of the Provincial People’s Committee and head of the PCFSC is responsible for coordinating the emergency response: he has the authority to mobilize human resources, materials and means of rescue, and is in charge of receiving and distributing relief funds. A Province faced with a disaster beyond its capacity will appeal to the CCFSC for assistance.

**Vietnam Red Cross (VNRC), Fatherland Front, Army units and border defense personnel** all assist the PPC with rescue and relief operations. The Red Cross has a network of volunteer members in provinces, districts, communes and villages across the country. All communes in the disaster-prone low-land areas have Red Cross branches which consist of a leader and volunteers in each village. Some commune Red Cross leaders are given allowances, others work voluntarily. There are also Red Cross branches in schools above the primary school level. The Fatherland Front coordinates the mass organizations to take part in disaster relief. Of the mass organizations, the Women’s Union and the Youth Union are the two most active in disaster relief. The Women’s Union works closely with other agencies on household visits, targeting of relief and organizing community support. The Youth Union plays an important role in mobilizing young people to assist in the clean-up following disasters.

**Natural Disaster Mitigation Partnership**

**Background.** The Natural Disaster Mitigation Partnership (the Partnership) was initiated following major flooding in seven provinces of Central Vietnam in 1999. The coincidental timing of the flooding and a Government of Vietnam-Donor Consultative Group Meeting (CG Meeting) in December 1999 created a momentum among the Government, donors and NGOs toward disaster reduction rather than disaster response and the recognition of the need to coordinate more effectively to help the people of Central Vietnam to overcome the consequences
of the recent flooding and to avoid further human and economic loss from recurrent natural hazards.

**Founding Partners.** This initiative was mandated by Central Government to be led by MARD, the United Nations Development Program (UNDP) and the Royal Netherlands Embassy (RNE). These three founding partners subsequently joined efforts to formulate a *Strategic Partnership to Mitigate Natural Disasters in Central Viet Nam* (the NDM Partnership). The initial output of Government, donors and NGOs was a statement of the NDM Partnership Objectives, followed by fact-finding, initial policy development and an agreement for participation in the Partnership.

**Formal Ratification of the Partnership Principles.** At the Mid-term CG Meeting in June 2001, Government approved a Memorandum of Agreement (MOA) for the Partnership for Central Vietnam. Further, Government has shown a strong commitment to implement the Partnership to reduce the impact of disasters and to improve overall co-ordination and co-operation of Government, donor, and NGO disaster mitigation efforts in all other disaster-prone regions of the country. The Partnership has since gathered wide support for the integrated NDM approach. The Donor Community, and the Bank in particular, has remained engaged and is mobilizing support for the Government in its shift to promote non-structural investments and community involvement that will continue to foster a broader approach to disaster-risk management.

**Implementation Phase and Objectives of the Partnership.** After a Preparatory Phase, the Partnership is now entering a second phase in which it will serve as a mechanism to establish and enhance the effectiveness and efficiency of the co-operation between the Government, represented by MARD, and international donors and NGOs. Specific objectives of the Partnership are:

- to manage and share information, including lessons learned, results achieved and proposals for future activities, among participating agencies in order to improve coordination in natural disaster mitigation, and to raise awareness and community involvement for effective natural disaster reduction;
- to advise Government on legislation, policies, strategies and priorities on natural disaster risk management; and
- to facilitate the development of institutional capacity for an integrated approach to natural disaster reduction at the central and provincial levels and to facilitate the development and funding of priority disaster mitigation projects.

This will be achieved through a Trust Fund managed by the Dyke Management and Storm and Flood Control Department (DMFSCD), which will finance the new Work Plan which provides a framework for its operations for three consecutive years, January 2005 to December 2007. The funding agencies include the UNDP, the RNE, AusAID, the Embassy of Luxembourg, and the Swedish International Development Agency (SIDA).

**Linkages between the Partnership and the proposed NDRMP.** The World Bank team received a lot of support and guidance from the Partnership throughout identification and preparation. Hence, several priority projects identified by the Partnership during the Preparatory
Phase are likely to be covered by the proposed project. Moreover, NDRMP is fully consistent with the proposed objectives and strategy of the Second Phase of the Partnership and will benefit from many activities supported by it, including: (a) improved coordination between Government, donors and NGOs; (b) capacity building; and (c) information and knowledge sharing.

B. SUMMARY OF INSTITUTIONAL ASSESSMENT

An Institutional Assessment Report, taking into account the preliminary results of a UNDP Study on natural disaster mitigation and management in Vietnam, was prepared by HQI as part of the project preparation and is presented in Attachment 4 of the Project Preparation Report. The scope of the proposed NDRMP limits the assessment to flood and storm disasters only.

The Institutional Assessment Report covers three inter-related areas, which were subsequently included in the design of Component 4:

- The definition of disaster mitigation and management;
- Institutional arrangements for project implementation; and
- The strategic and legal framework to guide and define disaster management actions.

Two specific outputs of Component 4 are envisaged:

- An Institutional Development Plan for the implementation of the Project
- Training and transfer of technology for staff in institutions involved at all levels in the Prevention-Response-Recovery cycle

The Institutional Assessment Report promotes a three-phased “Systems Approach” – basically employing an enhanced Prevention-Response-Recovery framework concept (see Figure 1, in Annex 1) which identifies the range of disaster mitigation and management activities as well as their mutual relationships. Furthermore, it addresses the cross-sectoral nature of disasters and their impacts, raising the issue of potential partnerships motivated by cooperation and shared responsibilities. The focus of the Institutional Assessment Study is on the Prevention and Mitigation phase and the Recovery and Reconstruction phase because these were the areas identified as the main weakness in disaster-related activities in Vietnam. They also represent the core activities of the proposed NDRMP.

Although the Second National Strategy and Action Plan covers the most important issues in disaster mitigation and management, the study finds that the Strategy still needs a legal framework to be function properly. Moreover, the study proposes that Component 4 activities should include updating the Second National Strategy in the light of modern disaster-risk management notions, including human vulnerability and the river-basin approach.

15 "Assessment of Institutional Capacity for Disaster Mitigation in Vietnam – Phase 1”. David Lempert et al. August 2003. The recommendations which were supposed to be included in the Phase 2 Report are not yet available.
Vietnam has given priority to laws and policies relating to disaster mitigation and management and has instituted an effective structure for disaster mitigation, the CCFSC and its subordinate provincial and local committees. Nevertheless, the study finds that the CCFSC's actions have been largely focused on Response activities and points out that the key organizations in disaster management need to be empowered to promote cross-sectoral coordination. A reorganization of the CCFSC is pending, following the new Ordinance on Prevention and Control of Floods and Storms (PCFS), introduced in 2000.

These organizations need empowerment, because of their cross-sectoral character, and capacity strengthening, in terms of human and material resources, in order to improve their performance. Coordination of disaster mitigation staff between different sectors needs to be further strengthened, and the capacity of disaster mitigation staff at local levels needs to be improved. Policies for disaster mitigation also need to be up-dated to keep pace with rapid socio-economic changes and to develop disaster management capacity. Moreover, mitigation and prevention actions cannot rely only on government actions; they also need the active participation of the general public, diverse communities and private organizations.

C. PROJECT MANAGEMENT STRUCTURE

Project Coordination

The CCFSC chaired by a Deputy Prime Minister would provide overall strategic, policy and technical guidance to support project implementation to be consistent and fully in line with the Government's Second National Strategy and Action Plan for Disaster Mitigation and Management. The CCFSC would take charge of the overall coordination among Government agencies to facilitate the implementation of the project. Coordination activities would include, but not be limited to, preventive and mitigation planning amongst sectors, mobilization of necessary resources to prepare investment proposals, project information dissemination and the monitoring of the quality of training activities toward NDRM benefits.

A high-level Project Steering Committee (PSC) chaired by the MARD Minister or his designated Vice-Minister in charge for disaster management would be established to oversee overall project implementation. Other Ministries and Agencies, such as the Office of the Government (OOG), MPI, MOF, MONRE, MOFI, MOT, MOH, MOE, and the State Bank of Vietnam (SBV) would be represented in the PSC. The current MARD-based Project Preparation Steering Committee, established on October 1, 2002 (Decision No. 4055/QD-BNN/TCB), could be assigned to act as a Project implementation Steering Committee (PSC), given its strong involvement in the project design and the need for continuity. The PSC would convene once every six months and in special circumstances to review overall project implementation progress and to provide timely solutions to address any outstanding issues arising during the course of implementation.

Project Management

Executing Agencies. There would be two executing agencies for this project:
MARD would be the primary executing agency for Components 1, 2 and 4. In its Decision No. 4487-TB/BNN-VP, dated December 20, 2004, MARD designated the Central Projects Office (CPO) to manage the proposed project and the DMSFC to be responsible for technical appraising, guiding, supervising and monitoring the implementation of the overall project. MARD’s CPO is currently in charge of all foreign-funded water resources projects in Vietnam, including two IDA-assisted water resources projects, and would be in charge of the overall project day-to-day management and coordination activities.

MOF, through the State Budget Department and State Treasury Department, would be responsible for the implementation of Component 3.

Central Project Management Office (CPMO). At the central level, the CPMO would be established within CPO and led by a designated CPO Deputy Director to take charge of project implementation and coordination. The CPMO would be responsible for overall project implementation planning and budgeting, coordination with other government line ministries, operation of the main Special Account (SA), preparation of consolidated quarterly project management reports (PMR), and resettlement, environment and social safeguards monitoring.

Staffing and Organization of CPMO. The Project Director would be hired through advertising and would be assisted by Program Officers in charge of Component 1 “Prevention and Mitigation Sub-projects”, Component 2 “Community-based Disaster Risk Management”, and Component 4 “Institutional Strengthening”, a chief accountant, a senior procurement officer, a training coordinator and an M&E officer. The Program Officer for Component 3 “Post-Disaster Reconstruction Support” would be designated by MOF. A pool of technical specialists (national and international) and administrative staff would be hired on a short-term basis to assist the Project Director and Program Officers and provide management support.

Project Coordination Units (PCUs). Implementation of non-MARD sub-projects would be the responsibility of the respective line ministries. For the Mekong River Delta Flood Warning and Monitoring System (Year 1 sub-project), MONRE would decentralize project management to the SRHMC. For non-MARD sub-projects in subsequent years, existing PMUs would be responsible for implementation. For instance, MOT would designate the existing Railways Projects Management Unit to implement the Railway Drainage System which is listed as a potential sub-project post-Year 2. Similarly, the existing Road Projects Management Unit No. 7 would be responsible for the Mekong Delta Road Flood Protection sub-project if selected for implementation under the project.

Provincial Project Management Units (PPMUs). At the provincial level, a PPMU would be established by the Provincial People’s Committee (PPC) to take full responsibility for implementing the project at the province level. Given the cross-sector activities envisaged under the project, the PPMU should be put under the direct management of the PPC which would appoint the PPMU Director and key staff. In order to avoid duplication of structures and to ensure institutional sustainability, the PPC would draw upon the Provincial Committee for Flood and Storm Control (PCFSC) to constitute a Provincial Project Steering Committee (PPSC). This Committee, supported by the PPMU, would assist the implementation of all project components by providing policy guidance on provincial disaster mitigation, ensuring
counterpart fund resources, initiating resettlement/land compensation dialogue and coordinating with other involved provincial departments to support the implementation of selected sub-projects within their jurisdiction. The Department of Agriculture and Rural Development (DARD), as the Standing Office of the PCFSC, and the Department of Planning and Investment (DPI), as the planning advisory entity, would have key roles in assisting the PPMU in selecting and implementing investment sub-projects.

**Staffing and Organization of PPMUs.** The PPMU Director would be assisted by an accountant, a procurement officer and a technical specialist (e.g., for sea-dyke in Ben Tre Province and Dam in Nghe An Province), satisfactory to the Bank in terms of qualification and experience. PPMUs would receive technical support as required from national and international consultants.

**Project Monitoring and Evaluation**

It is critical to be able to assess whether the project has the potential to influence the risk management capabilities of Vietnam. Equally important is the ability, in the final analysis, to be able to judge *ex post* whether the project actually had any measurable and significant effect on the national capability to institute effective disaster risk management. Without monitoring and evaluation activities, there can be no real assessment of either. The development of baselines and projected expectations can act as a valuable guide to project implementation activities. The monitoring and evaluation activities under the proposed project include: (a) project monitoring and evaluation under the responsibility of the CPMO, with support from the Disaster Management Center (DMC); and (b) institutional strengthening activities to enhance risk management capability.

Project implementation would be monitored at the central, provincial and commune levels. Overall monitoring and evaluation of the project will be the responsibility of CPMO, which would receive support from the DMC. At the sub-project level, the PPMUs would monitor local, provincial and community activities, as well as Ministry agency activities if these are located in the Ministries. The existing information structure developed for the CCFSC and its subordinate Committees at provincial and district levels would serve as an established conduit for information flow. CPMO would generally obtain information from the PPMUs and the People’s Committees at the provincial, district or village level.

Activities to be supported by the project would include: (a) the development of baselines for performance at all levels; (b) periodic evaluations of sub-projects against stated outputs and outcomes; (c) TA for monitoring and evaluation of investment decisions, tenders and contracts; (d) strategic studies performed to further national disaster risk management capabilities in the areas of reconstruction, risk-sharing and financing, and long-term national risk and vulnerability modeling; and (e) financial audits and reporting.

**Enhancing Risk Management Capability.** Knowledge of weather conditions, rainfall and stream monitoring play a critical role in determining which structures should be built for risk-management purposes and the design of the those structures. The coherence of the links between structural and non-structural sub-projects is critical to the success of the project, as is the need to
coordinate government and community activities. Equally important is the need to monitor the longer-term probability of risk-loss outside the bounds of normal human experience. Many of these aspects can be achieved though numerical modeling which, in most cases, when built on a coherent national geodetic system, and coupled with a comprehensive risk-GIS database, is the least costly and risky way to judge the suitability of structural improvements. Public awareness of hazards, a strong educational system, and commitment to multi-sectoral cooperation are also critical for achieving a reduction in disaster risk.

Activities to be supported by the project which would contribute to strengthening preparedness and risk management capability and enhancing monitoring and evaluation include: (a) national standards and training programs developed for disaster-risk GIS databases, risk mapping, and hazard and risk-loss modeling; (b) establishment of a national geodetic spatial geo-referencing system, acquisition of satellite remote sensing, aerial photographs and ortho-photo maps, and digital elevation models (DEMs) developed for risk management; (c) detailed GIS, DEM and hydrological-hydrodynamic modeling capabilities developed for specific river flooding and coastal storm impact in two major hazard-prone regions including TA for numerical modeling; (d) development and upgrading of hydro-meteorological monitoring and prediction capabilities in these areas through training and equipment purchase; and (e) functional multi-agency cooperative programs developed and implemented, involving appropriate authorities.

Role of Local Institutions in Monitoring and Evaluation. In line with the participatory, bottom-up nature of Component 2 there would be an important role for local institutions in monitoring. This role would be formalized and articulated through the Safer Commune Plans and through the involvement of the communes and their local organizations in following implementation and outputs of the plans on an annual cycle.

Project Reporting. Adequate policies and procedures would be maintained to monitor and evaluate project implementation and the achievement of objectives on a continuous basis, in accordance with indicators satisfactory to the Association. The following plan and reports would be prepared during project implementation:

- **A Monitoring and Evaluation Plan**, including methodology and key performance indicators, would be prepared by CPMO, with DMC support, and submitted to the Association for review by June 30, 2006;

- **Semi-annual progress reports** would be submitted to the Association for review by January 15 and July 15 of each year, beginning with January 15, 2006. These reports should contain results of monitoring and evaluation activities performed pursuant to above beginning with January 15, 2007, as well as a section on compliance with environmental and social safeguards; and

- **An annual work program and financing plan** for the whole project for the next calendar year, including the list of new sub-projects under Component 1, would be submitted to the Association for review by September 30 of each year.
**D. COMPONENT DESCRIPTION AND IMPLEMENTATION ARRANGEMENTS**

The multi-sectoral nature of the project is a major institutional challenge for project implementation as it would involve more than one government ministry at the central level and a large number of provinces. However, the CCFSC and its subordinate committees at the province, district and commune levels constitute a solid foundation for the proposed project as they assume a recognized leadership and have long-standing and proven experience in natural disaster risk management. The proposed project aims at strengthening these committees to ensure better coordination and integration among the various agencies and different levels responsible for prevention, response and recovery.

**Component 1 – Prevention and Mitigation Investments**

This component would support a range of priority structural and non-structural prevention and mitigation sub-projects of medium-scale investment, including: (a) structural sub-projects, which would center on participatory planning, construction and rehabilitation of flood and storm-control infrastructure; and (b) non-structural sub-projects, which aim to strengthen preparedness capability and create a basis for a system of flood and storm risk management in priority disaster-prone areas.

**Implementation Arrangements.** In general, the CPMO would be responsible for: (a) all procurement under International Competitive Bidding (ICB) and Quality- and Cost-Based Selection (QCBS) and for those civil works and goods contracts of MARD’s sub-projects; and (b) resettlement, environment and social safeguards monitoring.

- **MARD’s sub-projects.** Implementation of MARD’s sub-projects would take place through two mechanisms: (a) for complex dam safety or inter-provincial sub-projects, MARD’s Sub-project Implementation Offices (SIO) network would be responsible for the management of physical implementation; and (b) for dyke rehabilitation and/or improvement, river bank protection, etc., implementation responsibility would be assigned to the respective PPMU in the project province.

- **Non-MARD sub-projects.** Implementation of non-MARD sub-projects would be the responsibility of the respective line ministries who are benefiting from the project funds, through PCUs for prevention and mitigation investments within their jurisdiction, with key staff qualifications and experience satisfactory to IDA.

**Component 2 – Community-based Disaster Risk Management and Pilot CBDRM Program**

Disaster risk management activities at the community level include: (a) a stand-alone Pilot CBDRM Program which would identify, design and implement natural disaster risk management activities using participatory methodologies in vulnerable communes in the disaster-prone provinces of Ben Tre, Thua Thien Hue and Ha Tinh; and (b) a CBDRM scaling-up program under Component 2 which would build on the lessons learnt from the pilot to prepare and start implementing Safer Village and Safer Commune Plans in 30 or more additional communes.
Project Coordination and Management. The activities under Component 2, as well as those under the Pilot CBDRM Program to be financed under the Innovative Approaches to Community-based Disaster Risk Management Project financed by the Japan Social Development Fund (JSDF) Grant and approved on January 27, 2005, would follow the same implementation arrangements. The CPMO would be responsible for the day-to-day project implementation, supervision, project monitoring and financial management. The project would be guided by the CCFSC.

Project management would be based on a demand-driven decentralized structure granting communes highest-level decision-making power, ownership and responsibilities for the proposed investments. The key features of the proposed organizational structure and functional responsibilities are briefly described below and are detailed in the CBDRM Manual.

Commune Level. The Commune CBDRM Coordination Committee (CCCC) would be the key institution at the commune level for population mobilization; identification of needs, preparation of the Safer Commune Plans and investment plans based on the Safer Village Plans; and the implementation and supervision of sub-projects. The CCCC would sign a Memorandum of Understanding with the PPMU to secure funds for the Safer Commune Plans. Representatives from the CCCC would be involved in the selection of the contractors, and in the evaluation and certification of the satisfactory completion of works. CCCCCs would be formed in each pilot commune, headed by a member of the Commune People’s Committee and including representatives from mass organizations.

Full-time Community Facilitators (CFs) would be employed under the project to introduce the project to the villages and communes and to facilitate the CBDRM process in the preparation of the Safer Village and Commune Plans and sub-project selection, implementation and management. CFs will work closely with CCCCCs and help their interactions with district, PPMU and other concerned parties. Twenty CFs would be recruited at the start of the project by the ten participating communes and would receive training immediately. Each commune would nominate one man and one woman.

Provincial Level. The PPMUs in each project province would have the following major functions: overall project management and supervision in the province; support and supervision of the CFs; coordination with DARD and district technical units to provide assistance on the technical aspects of the Safer Commune Plans; consolidation of the Safer Commune and investment plans; initiation and assurance of the fund flow and procurement planning process, provision of counterpart funds, monitoring and evaluation and reporting.

Central Level. CPMO would be responsible for the overall project management, fund transfer, exchange of information and experiences between provinces, inter-departmental and inter-agency co-operation/coordination, capacity building and human resource development, monitoring and evaluation, financial auditing and reporting required by IDA. The CPMO would be responsible for managing the SA for the JSDF Grant.

Technical assistance and capacity-building activities at the central, provincial, commune and village levels would be implemented by national and international Community-based Disaster
Risk Management Advisors and contracted organizations such as the Vietnam Red Cross Societies and other NGOs. The district DARD technical units would also provide technical guidance at the commune levels.

Component 3 – Post-Disaster Reconstruction Support

This component has been designed to partially address a recurrent financing gap in public resources available to fund reconstruction costs associated with natural hazards, including lower-level localized disasters. It aims to provide a rapid disbursement facility to fund post-disaster reconstruction of eligible public infrastructure, supporting fast recovery and reducing the diversion of limited public investment resources from new development investments into reconstruction. The component would operate to the extent possible in accordance with existing government procedures for allocation and disbursement of its State Contingency Budget. It would be accompanied by institutional support to improve the damage assessment process and the efficiency and effectiveness of utilization of public resources for post-disaster response.

Implementation Arrangements. The MOF would be responsible for managing and implementing this Component. The involvement and support from State Treasury, State Budget and External Finance Departments would be essential to the success of implementation. A PCU would be established in MOF and staffed to the satisfaction of the IDA.

The MOF would open a SA at a state-owned commercial bank on terms and conditions acceptable to the IDA and exclusively for use for the IDA Credit under this Component. MOF would be the owner of this account and the State Treasury would be the signatory.

In the event of a disaster, the MOF would apply pre-determined criteria to establish whether the event is sufficiently serious to qualify for Component 3 funding. If so, a technical expert hired under Component 3 and located within the DMC would participate in the damage validation process, assist the provinces to prepare adequate report information, provide advice on hazard-proofing of infrastructure and confirm safeguard compliance of potential IDA-funded activities. Following damage validation, the MOF would propose a list of reconstruction activities and related goods and equipment that should be funded under the Component, using eligibility criteria as stipulated in the Operations Manual. The cost of these activities would be estimated using cost estimates prepared by the provinces or agreed unit costs of construction as stipulated in the Operations Manual.

Following approval by the OOG, the MOF would forward the list of potential IDA-funded reconstruction activities to the IDA for endorsement on a “no objection” basis. The State Treasury would then release approved IDA funds in full to relevant provincial treasuries or, in the case of national infrastructure, to line ministries. Transfer instructions would specify how IDA funds must be used and indicate that full compliance with the Component 3 Operations Manual is required. In the 12 provinces covered by Component 1 of the project, the PPMUs would be responsible for contracting arrangements and overseeing construction. In other provinces, existing PMUs under the PPC would hold these responsibilities. The Provincial Treasury would pay contractors directly, following submission of payment requests by
PMUs/PPMUs. The CPMO would have broader financial management responsibilities for preparing consolidated financial and physical progress reports from information provided by the MOF, State Treasury, and PPMUs. If IDA funds are used to finance reconstruction of national infrastructure, existing PMUs under the relevant line ministries would implement the activity, under the guidance of the Ministries’ Committees for Flood and Storm Control (see Section A).

Operations Manual (OM). A draft OM for Component 3 has been prepared and would be finalized as a condition of disbursement before the implementation of the reconstruction activities under this Component could begin. MOF and MARD would need to carry-out jointly a diagnostic analysis of the Government’s damage assessment process and any remedial action and recommendations required would need to be incorporated into the OM. These independent diagnostic studies would be funded under the project by a PHRD Co-Financing Grant. In addition, the project would support the provision of appropriate training relating to financial management procedures and damage assessment methodologies.

Release of Funds and Replenishment. The funds for Component 3 (under Phase I of the APL) would provide additional funds for contingency funding for post-disaster reconstruction. The report-based disbursement method would be used for this Component and MOF would submit a withdrawal application for the funds annually. Funds would be transferred initially to a US$ foreign exchange account of the Government. The funds would be recorded in the State Treasury System, transferred to the relevant Provincial Treasuries, and expenditure recorded in the State Treasury system.

The State Treasury and the MOF would prepare quarterly financial reports for Component 3 to monitor payments for each investment and would submit these reports to the CPO for inclusion in the quarterly project FMR for submission to the IDA. The MOF and the State Treasury have agreed that they can produce the Statements of Sources and Uses of Funds for the quarterly financial reports.

Monitoring and Evaluation. IDA would also undertake ex post review of allocations when requests for replenishment of the SA are received. An annual external financial audit would also be undertaken. In addition, an independent monitoring entity, acceptable to the Association, would carry out an annual technical evaluation of works. The oversight mechanism established for other components of the project would apply to Component 3.

Table 8 – Indicative Disbursement profile for Component 3, 2005-2008

<table>
<thead>
<tr>
<th>Year</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount disbursed</td>
<td>(Finalization of OM, training and diagnostics study)</td>
<td>US$6m</td>
<td>US$7m</td>
<td>US$6m</td>
</tr>
</tbody>
</table>
Component 4 – Project Management and Institutional Strengthening

Description. Under this Component, the project would support three areas of activities: (a) project management and technical assistance; (b) project monitoring and evaluation; and (c) an institutional strengthening development plan.

Implementation Arrangements. The overall implementation of Component 4, with the exception of project monitoring and evaluation, would be the responsibility of the CPMO and a dedicated Program Officer would be appointed. The DMC, under the DMFSCD in MARD, would be responsible for monitoring project implementation and evaluating its impact and outcomes.

E. IMPLEMENTATION READINESS

Retroactive Financing. Retroactive financing, estimated at about US$2 million, would be used to finance technical design and bidding documents of Year 1 sub-projects and feasibility studies of Year 2 sub-projects, with the exception of the dam safety studies for the Vuc Mau Reservoir Rehabilitation sub-project which would be financed under the Vietnam Water Resources Assistance Project (Cr. 3880-VN).

Work-program post-Year 1. Implementation of subsequent sub-projects would follow those for approved sub-projects’ feasibility studies, which include detailed investments on civil works, goods and services toward natural disaster prevention and mitigation activities. Each feasibility study would include the following sections as a minimum: (a) rationale for investment; (b) scope of activities according to the selected investment option; (c) implementation arrangements; (d) procurement and engineering consultants’ arrangements; and (e) social and environmental safeguard documents.

Each sub-project feasibility study would be reviewed by IDA prior to its implementation to ensure the consistency of the objectives, scope of activities and result outputs. In particular, implementation of civil works would follow the approved feasibility study, including: (a) procurement and engineering consultants; (b) site survey and investigation, and detailed technical designs; (c) preparation of bidding documents and tendering; and (d) construction and quality control.

Project Implementation Manual (PIM). A detailed PIM has been prepared and will guide implementation. The PIM addresses organizational, procurement and financial management issues, implementation planning, and division of responsibilities during project implementation. The PIM refers to the Operations Manuals for “Community-based Disaster Risk Management” and Component 3 “Post-disaster Reconstruction Support”. The PIM would be finalized before effectiveness of the credit and would be regularly updated over time with actual project implementation progress.

Disbursement Rate. The project would start implementation with the first three sub-projects under Component 1. However, disbursements would be low in the first two years, given the time needed to prepare terms of reference, select consultants to prepare detailed technical designs, and
review and approve detailed designs. In addition, Component 1 includes significant infrastructure investments which would involve resettlement and land acquisition activities, potentially delaying implementation.

In later years disbursement could be significantly increased as construction and delivery of goods accelerate. The disbursement rate in later years would depend heavily on: (a) satisfactory progress in procurement of local consultants to prepare detailed technical designs, overall cost estimates, and tender documents of follow-on sub-projects; (b) the quality of feasibility studies and bidding documents to be reviewed by international consultants; and (c) the effectiveness and timeliness of resettlement and land acquisition activities and availability of counterpart funds. Intensive and close supervision would therefore be needed from the start of the project.
Appendix 1

Figure 4 – Organizational Chart for Natural Disaster Risk Management

[Diagram of organizational chart showing various government bodies and their relationships, including the Council of Ministers, Ministry of Agriculture and Rural Development, Central Committee for Flood and Storm Control, and other relevant entities.]

Vietnam Central Committee for Flood and Storm Control (CCFSC)

1. Ministry of Agriculture and
   Rural Development
2. Office of Government
3. Ministry of Construction
4. Ministry of Fisheries
5. Ministry of Transport
6. Ministry of Labor, War
   Invalids & Social Affairs
7. Ministry of Planning & Investment
8. Ministry of Finance
9. General Dept of Hydrometeorological Services
10. Ministry of Defense
    (People's Army)
11. Ministry of Healh
12. Department of the
    People's Police
13. Ministry of Commerce
14. Vietnam Television